



November 2013

# Crepidotus Notebook 1

L. R. Hesler

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## Recommended Citation

Hesler, L. R., "Crepidotus Notebook 1" (2013). *Dr. Hesler Botanical Research*.  
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24893

CREPIDOTUS ~~HAERENS~~ *alabamensis* Kuvv.

Photo

Pileus laterally attached, 10-33 mm. broad, viscid when wet, hygrophanous, white, base white-mycelioid, elsewhere appearing glabrous, margin drying last, finely striatulate. Context white, rubbery; odor and taste mild.

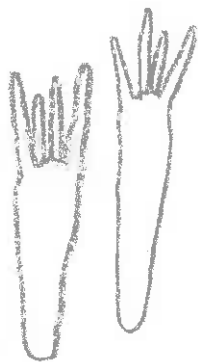
Lamellae narrowly adnate to lateral tubercle, radiating, close, narrow, brownish with an olive tint.

Stipe none.

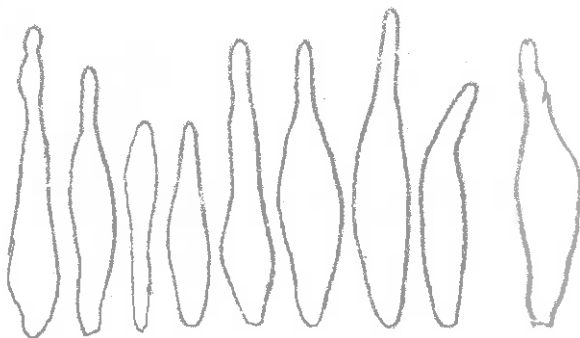
Spores (6.5) 7-8.5 x 4.5-5 (5.5)  $\mu$ , ellipsoid, a few sub-amygdaliform, smooth. Basidia 30-42 x 6-7  $\mu$ , 4-spored, sterigmata often very long (9-12  $\mu$ ). Pleurocystidia none; <sup>(1) hymenial:</sup> cheilocystidia 27-41 x 2-4 (apex) x 5-8  $\mu$  (base), ventricose, fusoid, obclavate, clavate, usually with a prominent neck, <sup>(2) trama similar, longer when gelatinous, 60-86 x 5-7  $\mu$ .</sup> clustered; Gill trama subparallel, cells relatively short, 6-12  $\mu$  broad. Pileus trama interwoven. Cuticle an ixocutis, hyphae loosely interwoven, the gelatinous zone 90-130  $\mu$  thick; Clamp connections none.

no brown hyphae.

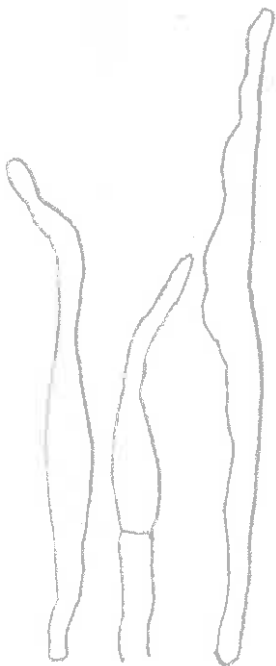
*Gepidotus alabamensis* Murr.  
~~*Gepidotus racem* PK.~~  
 No. 24893



Brachia -  
 x 1000



Ch (hymenial)  
 ^ x 1000



Ch (travert) - x 1000

24963

*alabamensis* Murr.  
CREPIDOTUS ~~HAERENS (Pk.) Sacc.~~

Pileus 1-3 cm. broad, white, hygrophanous, viscid, densely appressed <sup>white-</sup>fibrillose, short-striate when wet. Context white, medium thick; odor and taste mild.

Lamellae adnate, close, medium broad, white then "snuff brown," edges even.

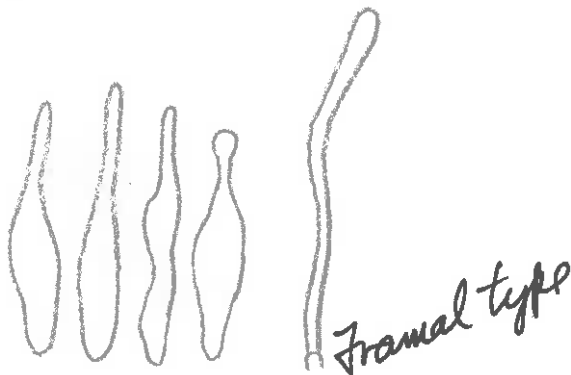
Stipe none; pileus attached to a lateral tubercle which is white-strigose.

Spores 6-7.5 x 4.3-5  $\mu$ , ellipsoid, smooth, color in deposit: "Dresden brown." Pleurocystidia none; cheilocystidia 30-35 x 5-7  $\mu$ , ventricose to obclavate, more rarely constricted, more or less appendiculate; or slender-filamentous, 40-50 x 2  $\mu$ , and tramal. Gill trama subparallel, hyphae 4-7  $\mu$  broad. Pileus trama interwoven. Cuticle an ixocutis, 110-200  $\mu$  thick; Gill edges usually gelatinized.

no brown hyphae.

*alabamensis* Muir.  
*Orepidotus* ~~*racens* (PK) Race.~~

No. 24963



Oh - x 1000

CREPIDOTUS ALABAMENSIS Murr.

(H-25817)

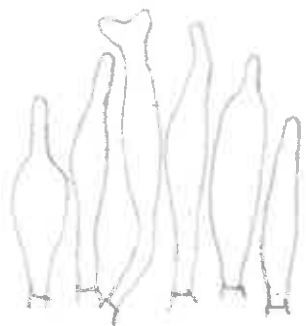
Pileus white, obscurely pruinose (under lens).

Lamellae white, then brownish, medium close, moderately narrow.

Spores 5.5-7.8 x 4-5  $\mu$ , ellipsoid, obscurely inequilateral, smooth. Cuticle a gelatinous zone, the surface bearing more or less a turf of erect, <sup>colorless</sup> hyphoid pilocystidia. Clamps none. *No brown hyphae.*

*Gepidostus alabamensis* Murr.

35833



ch x 1000

CREPIDOTUS ALBATUS sp. nov.

(No. 3658)

Pileus 3-8 mm broad, mostly dorsally attached, somewhat orbicular, white (buff when dried), downy-villose, white-tomentose at point of attachment, dry, margin even, incurved, Context thin, pallid.

Lamellae narrowly adnate, radiating from a lateral point, white, finally yellowish-brown, edges even to minutely fimbriate (under lens), medium broad, close.

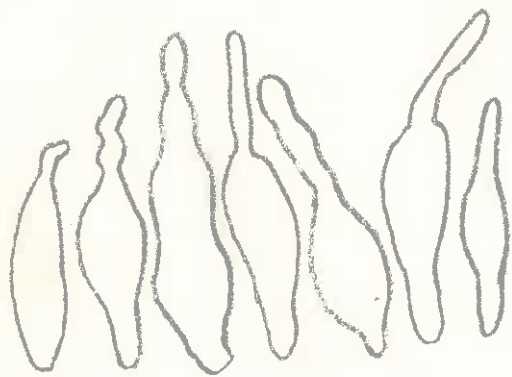
Stipe eccentric, short, inconspicuous (more noticeable in young pilei), then disappearing.

Spores 6-8 (9) x 4-5  $\mu$ , ellipsoid, punctate-rough (clearly so when mounted in 2% KOH, only very faintly so in H<sub>2</sub>O), yellowish-brown in 2% KOH microscopic mounts. Basidia 18-26 x 5.5-8  $\mu$ , 4-spored. Pleurocystidia 24-39 x 5-8  $\mu$ , clavate to flask-shaped, usually appendiculate with a conspicuous neck, projecting only slightly, somewhat erratic in occurrence, absent in many sections; cheilocystidia 31-45 x 6-10  $\mu$ , similar, clustered, conspicuous when present, absent in many sections. Gill trama of irregularly interwoven narrow hyphae. Pileus trama of interwoven hyphae. Cuticle a trichodermium, the hyphae long, numerous, narrow (2-3  $\mu$  broad). Clamp connections occasional, small, and only moderately conspicuous.

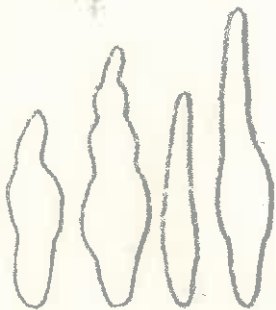


*Crepidotus albatrus* sp. nov.

No. 3658



Ch -  $\times 1000$



Ch -  $\times 1000$

GREPIDOTUS ALBIDUS E. & E.

Philadelphia Acad. Nat. Sci. Proc. 1894:322. 1895

Pileus 5-7.5 mm broad, sessile, resupinate, nearly white, glabrous, margin incurved when dry.

Lamellae radiating from a lateral point, pallid, becoming yellowish-brown, broad, not crowded, thin.

Spores 5-7 x 4-5  $\mu$ , ellipsoid, smooth. Basidia 27-31 x 5-6  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 25-35 x 2-5  $\mu$ , more or less filamentous to cylindric, somewhat flexuous. Pileus trama interwoven. Cuticle of repent hyphae, bearing more or less erect, slender, short hyphae. Clamp connections small and rare.

Habit, Habitat, and Distribution - On hardwood, Michigan and Colorado, April-May.

Materials Studied - COLORADO: Bethel, collected at Palmer Lake, March 1911, deposited at N. Y. Botanical Garden Herbarium, marked "Type"; MICHIGAN: Smith 66258 (Kauffman 95), on dead trees, Ann Arbor, collected by A. J. Pieters, May 23, 1894, and marked "Co-Type" by Kauffman; a portion of the type collection, presumably sent from Ann Arbor to Ellis by Pieters, is on deposit at N. Y. Botanical Garden, and another portion is at University of Michigan.

Observations - The material of both the Michigan and Colorado collections is sparse, and not satisfactory for critical study. The description of the spores given above is based on the co-type from Michigan; this material is inadequate for a microscopic study

of the pileus and gills. The description of gill and pileus structure above is based on the Bethel collection from Colorado, which is not the type, even though it is so marked.

Although our study of this species is unsatisfactory, we include an account of it for the record, and in the hope it may be found again. It is characterized by its small whitish, glabrous pileus, its short, smooth spores, and the presence of clamp connections.

CREPIDOTUS ALBIDUS E. & E.

Philadelphia Acad. Nat. Sci. Proc. 1894:322. 1895.

Pileus 5-7.5 mm broad, resupinate-sessile, nearly white, glabrous, margin incurved when dry.

Lamellae radiating from a lateral point, pallid becoming yellowish-brown, broad, not crowded, thin,

Spores about  $5 \times 3.5 \mu$ , subinequilaterally elliptical.

Habit, Habitat, and Distribution - On bark of (Tilia?), Ann Arbor, Mich., May, 1894 (A. J. Peiters).

Material Studied - (Note: two collections were sent me on loan from the N. Y. Bot. Garden: (1) marked "type, I guess," from Ann Arbor, coll. A. J. Peiters, Apr. 23, 1894; it was inadequate for study; (2) marked "type," from Palmer Lake, Colorado, coll. by E. Bethel, Mch. 1911; but this can hardly be the type since both Kauffman and Murrill say that the type is at Ann Arbor.)

Observations - The Above description is from the original by Ellis & Everhart (l. c.).

CREPIDOTUS ALBIDUS E. & E. ~~(5/11/48)~~

(Collected Apr. 23, 1894, by A. J. Pieters, on logs,  
Ann Arbor, Mich.)

*from the N.Y. Bot. Garden*

On the folder <sup>^</sup>this is marked "type." On the packet,  
it is marked "type, I guess."

The material is wholly inadequate for study.

It can hardly be the type, since Kauffman says the type  
is at Ann Arbor.

CREPIDOTUS ALBIDUS E. & E.

Type (?)

(Specimen marked type, from Palmer Lake, Colorado, Mch. 1911, coll. by E. Bethel, on Quercus gambellis. Material sparse, and somewhat unsatisfactory for study.)

*from N.Y. Bot. Garden, and*

Spores  $5.5-7.5 \times 4-5 \mu$ , ellipsoid, smooth. Basidia  $27-31 \times 5-6 \mu$ , 4-spored. Pleurocystidia none; cheilocystidia more or less filamentous,  $25-35 \times 2-5 \mu$ . Gill trama not distinct enough for study. Pileus trama interwoven. Cuticle a cutis with scattered, more or less erect, slender, short hyphae. Clamp connections small and rare on the tomentum at the base of the pileus.

This can hardly be the type. Both Kauffman and Murrill say the type is from Ann Arbor, Mich., and give the spores  $5 \times 3.5 \mu$ . Singer (Lilloa 13:62) gives the spores  $5-6.8 \times 4.8-6 \mu$ .

CREPIDOTUS ALABAMENSIS Murr.

Type

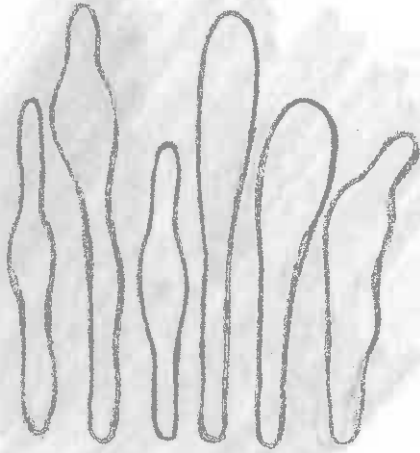
(Coll. F. S. Earle, at Palmetto Swamp, on persimmon bark, near Auburn, Ala., Sept. 1, 1899)

Notes as of Dec. 19, 1962

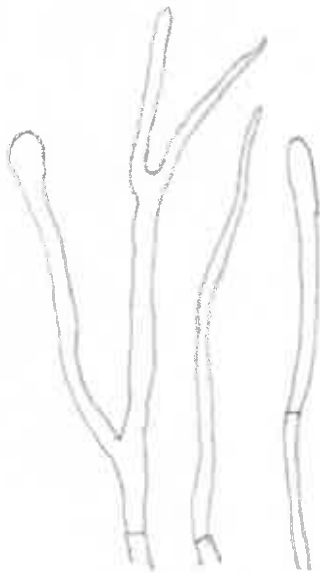
Spores 6-8.5 x 4-5  $\mu$ , ellipsoid, smooth, brown in 2% KOH. Basidia 22-26 x 5-7  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 37-60 x 6-10  $\mu$ , clavate, ventricose, at times irregularly-shaped or constricted, gelatinous. Gill trama subparallel, hyphae 6-12  $\mu$  broad. Pileus trama interwoven. Cuticle a thick (175-300  $\mu$ ) ixocutis comprising about half the flesh of the pileus, of loosely interwoven, gelatinous hyphae. Clamp connections none on the cuticle nor on the villose-tomentum at the base of the pileus. No brownish fibrils (hyphae) found on the pileus.

The material is very sparse.

*Crepidatus alabamensis* Muir.  
Type



Ch -  $\times 1000$



Peds -  $\times 1000$



5388

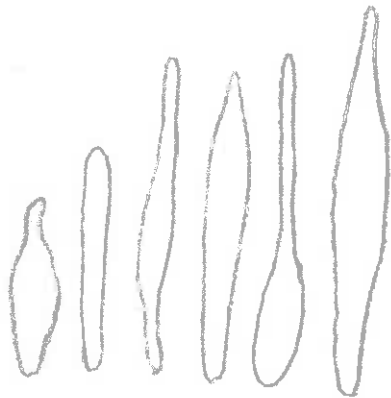
*alabamensis* Murr.  
CREPIDOTUS ~~HAERENS~~ (Pk.) Sacc.

Spores (6) 7-8.5 ~~1000~~ x (4) 4.5-5  $\mu$ , ellipsoid, slightly inequilateral, smooth. Basidia 22-28 x 6-7  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia: (1) hymenial, clavate, fusiform, ventricose, bottle-shaped, 30-50 x (3) 5-7  $\mu$ ; (2) tramal, 42-55 x 3-6  $\mu$ , filamentous, apex often more or less enlarged, gelatinous. Gill trama of rather short, branched cells. Subhymenium a narrow (15-25  $\mu$ ) zone of more or less parallel hyphae. Cuticle a gelatinous zone, 100-225  $\mu$  broad, with some hyphal ends more or less erect; no brown hyphae.

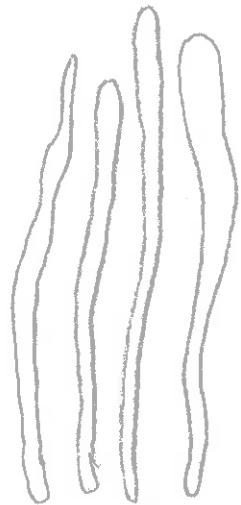
Cf. alabamensis.

*Crepidotus* <sup>alabamensis</sup> ~~laevis~~ (Pk.) Pace.

No. 5388



Hymenial Ch -  $\times 1000$



Triradiate Ch -  $\times 1000$

8966

*alabamensis* Murr.  
CREPIDOTUS ~~HAERENS~~ (Pk.) Sacc.

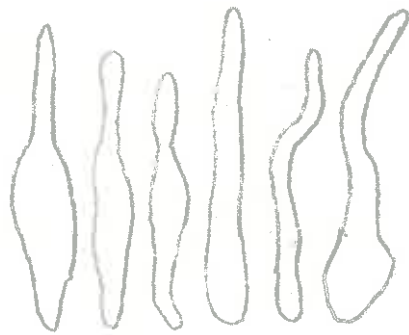
Pileus 1-2 cm broad, sessile, laterally attached, semiorbicular to flabelliform, white, glabrous, white-tomentose at base, viscid, even.

Lamellae radiating from a lateral tubercle, close, medium broad, brown.

Stipe none.

Spores (5.5) 6-8.5 x 4-5  $\mu$ , ellipsoid, inequilateral, smooth, brown under microscope. Pleurocystidia none; cheilocystidia: hymenial, 28-55 x 2.5-8  $\mu$ , obclavate or ventricose; tramal, 50-62 x 4-5  $\mu$ , filamentous. Gill trama of subparallel hyphae. Pileus trama interwoven. Cuticle a gelatinous zone, 65-110  $\mu$  thick, with no brown hyphae. Clamp connections none on cuticle, trama or tomentum at the pileus base.

*Orepidotus* 8966



Hymenial ch. - x 1000



Frontal ch. - x 1000

9208

*albamenus* Murr.  
CREPIDOTUS ~~HAERENS (PR.) Sacc.~~

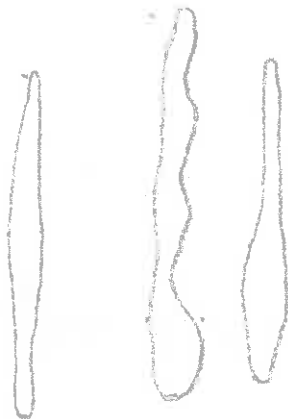
Pileus 1-4.5 cm. broad, very viscid.

Spores 7-8.5 x 4-5.5  $\mu$ , ellipsoid, smooth. Pleurocystidia none; cheilocystidia mostly subventricose, often irregular, 32-50 x 4-5  $\mu$ . Gill-trama nearly parallel. Pileus trama composed of a gelatinous hyphae throughout the upper (outer) three-fourths.

~~XXXXXXXXXXXX~~

*Crepidotus haerens* (Pk.) ~~Sacc.~~

No. 9208



Ch - x 1000

12227

*alabamensis* Murr.  
CREPIDOTUS ~~HAERENS (Pk.) Sacc.~~

Spores 6.5-8.5 x 4-5  $\mu$ , ellipsoid, smooth. Pleuro-cystidia none; cheilocystidia flask-shaped to ventricose, 36-45 x 2.5-3 (apex) x 7-8 (base)  $\mu$ . Pileus trama interwoven. Cuticle a gelatinous zone, 100-180  $\mu$  thick; no brown hyphae.

Pileus glabrous, no brown fibrils.

13241

CREPIDOTUS ALABAMENSIS Murr.

Pileus whitish, glabrous, viscid.

Lamellae medium broad, close, edges gelatinous.

Spores 6-8 x 4-5  $\mu$ , ellipsoid, inequilateral in profile, smooth. Pleurocystidia none; cheilocystidia gelatinous. Gill trama subparallel, hyphae 5-11  $\mu$  broad. Pileus trama interwoven. Cuticle a gelatinous zone 110-180  $\mu$  thick, surface bearing scattered, colorless hyphae and some pilocystidia. Clamp connections none.



CREPIDOTUS ALABAMENSIS Murr.

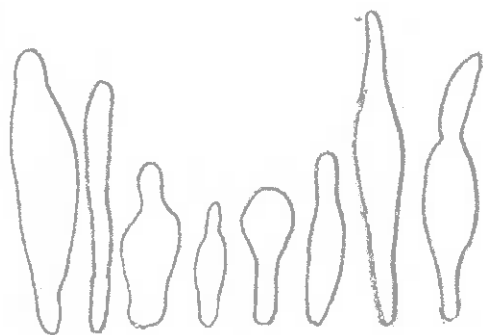
(H-19624)

Spores (6.5) 7-8.5 x 5-6  $\mu$ , ellipsoid, smooth, brown under microscope. Basidia 23-27 x 5-6  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 15-40 x 3-8  $\mu$ , often gelatinous, cylindric, ventricose, clavate, apices obtuse or appendiculate. Gill trama subparallel, hyphae 5-8  $\mu$  broad, cells relatively short. Pileus trama loosely interwoven. Cuticle an ixocutis, 50-80  $\mu$  thick, the surface bearing relatively short, colorless, narrow (2-6  $\mu$ ) hyphae - the terminal elements pilocystidioid - which form more or less of a turf; pilocystidia aciculate, capitate, forked or branched. Clamp connections none (either on epicuticular hyphae or on hyphae at point of attachment of pileus to substratum).

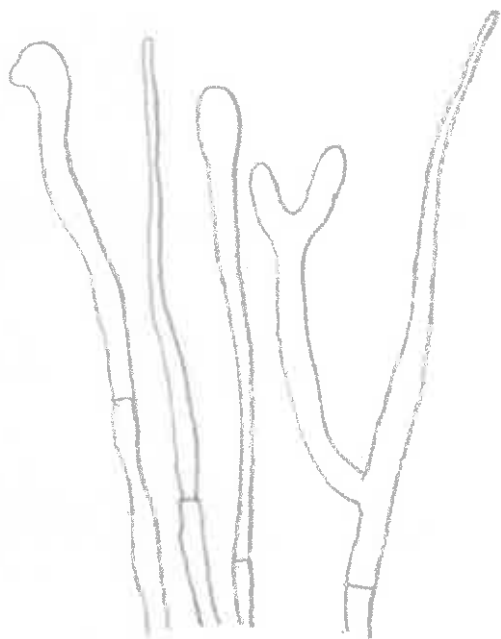
Some gill edges appear more or less gelatinous.

Murrill collected this at Gainesville, Fla., and erroneously identified it as C. mollis.

*Cepidotus alabamensis* Murr.  
(No. 19624)



Ch - x 1000



Pile - x 1000

*alabamensis* Murr.

21871

CREPIDOTUS HAERENS (Pk.) Sacc.

Spores 6-8 x 4-5  $\mu$ , ellipsoid, smooth, Pleurocystidia none; cheilocystidia clustered, mostly flask-shaped to sub-cylindric or fusoid, often appendiculate, 30-38 x 5-8  $\mu$ . Gill-trama subparallel to slightly interwoven. Subhymenium a narrow zone of more or less parallel hyphae. Cuticle an ixocutis 70-170  $\mu$  thick; <sup>no brown hyphae</sup> Clamp connections none on epicuticular hyphae nor on tomentose hyphae at base of pileus. Gill edges more or less gelatinous.

alabamensis?

CREPIDOTUS No. 21871

NEWARK

Spores 6-8 x 4-5  $\mu$ , ellipsoid, smooth. Pleurocystidia clavate-appendiculate, 30-38 x 6-8  $\mu$ , the neck at times forked; cheilocystidia clustered, mostly flask-shaped to subcylindric or fusoid, often appendiculate, 30-38 x 5-8  $\mu$ . Gill trama subparallel to slightly interwoven. Subhymenium a narrow zone of more or less parallel hyphae. Cuticle an ixocutis 70-170  $\mu$  thick; no brown hyphae. Clamp connections none on epicuticular hyphae nor on tomentose hyphae at base of pileus. Gill edges more or less gelatinous.

22996

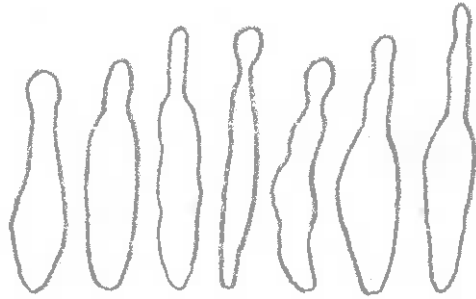
*alabamensis* Murr.  
CREPIDOTUS ~~HAERENS~~ (Pr.) Sacc.

Pileus white, viscid, glabrous.

Spores 6-8 x 4.3-5.2  $\mu$ , ellipsoid, smooth, "Dresden brown." Pleurocystidia none; cheilocystidia 30-65 x 3-7  $\mu$ , cylindric to subfusoid-cylindric or flask-shaped, more or less appendiculate. Gill trama subparallel, hyphae 5-10  $\mu$  broad. Pileus trama loosely interwoven, branched. Cuticle an ixocutis, 90-130  $\mu$  thick; no brown hyphae. Clamps none on villose hyphae at point of attachment of pileus to substrate.

The gill-edges are gelatinous.

*Orepidotus* <sup>alabamensis Murr.</sup> ~~laevis (Pk.) Sacc.~~  
No. 22996



~~St~~  $Ch_1^{(hymenial)}$   $\times 1000$



22996 - *Orepidotus alabamensis* Muir.

## NEW SPECIES OF FUNGI FROM VARIOUS LOCALITIES.

BY J. B. ELLIS AND B. M. EVERHART.

## \* HYMENOMYCETES.

*Crepidotus albidus* E. & E.

On bark of (*Tilia*)? Ann Arbor, Mich., May, 1894 (A. J. Pieters).

Pileus resupinate-sessile, nearly white, glabrous,  $\frac{1}{4}$ – $\frac{3}{4}$  cm. across, margin incurved when dry. Lamellæ not crowded, thin, broad for the size of the plant, pallid, becoming yellowish-brown, radiating from a lateral point, spores yellowish-brown, subinequilaterally elliptical, about  $5 \times 3\frac{1}{2}\mu$ .

*Polyporus pachycheiles* E. & E.

On the side of a rotten maple (*Acer rubrum*) stump, Newfield, N. J., Nov. 1893.

Imbricated, small,  $1\frac{1}{2}$ –2 cm. wide, 1 cm. long, milk-white at first, margin soon turning yellow, mostly narrowed behind, the pilei connected by a resupinate layer, surface apparently velutinous but not tomentose, hardly depressed behind. Pores minute, 2–3 mm. long,  $120$ – $150\mu$  wide, round or by the splitting of the walls, here and there subsinuate, margins even, and laterally flattened. The pileus thin, not over 1 mm. thick and like the pores and the whole plant tough-cartilaginous. Surface of pileus faintly zonate toward the margin, more distinctly so in drying. The pores are nearly as long in front as behind, thus thickening the margin of the pileus, hence the specific name.

*Poria inermis* E. & E.

On dead shrubs and limbs of various deciduous trees, Newfield, N. J. Received also from Michigan, Canada, Nebraska and Louisiana. Issued in N. A. F., No. 313, as *Polyporus obliquus*, from which it is quite distinct.

Resupinate, adnate, seriate, extending along the limb for six inches or more and about one inch wide, yellowish-brown, 2–4 mm. thick in the middle, margin thin, narrow, light-yellow (when fresh) and closely adnate. Pores small, round, extending down to the underlying wood. Spores ferruginous, sub-globose,  $4$ – $5\mu$  diam.



*Mucronoporus fulvidus* E. & E.

On dead limbs of *Alnus*, Berkeley, Cala., Jan., 1894 (W. C. Blasdale, No. 181).

Resupinate, adnate, tawny-yellow, extending along the limb for 6-8 or more centimeters and 3-4 cm. wide, margin velvety tomentose, narrow, sterile, adnate. Pores short (1 mm. or less), round, extending down to the matrix without any distinct subiculum. Spores hyaline, sub-globose, about  $2\mu$  diam. Spines tolerably abundant,  $25-35 \times 3-4\mu$ , rather pale.

Has the aspect of *Poria inermis* E. & E., but surface of pores more uneven, and spiny within.

*Hydnum Washingtonianum* E. & E.

On the ground in deep coniferous woods, Tracyton, Kitsap Co., Wash., Dec., 1893 (Adella M. Parker, No. 214).

About 4 cm. high, pale orange, carnose, subviscose. Stipe central, 3 mm. thick, subattenuated below. Pileus about 4 cm. across, slightly depressed in the center, thin, glabrous, wrinkled when dry. Aculei subulate, cylindrical, 3-5 mm. long, pale yellow, nearly white when fresh, decurrent half way down the stem. Spores angular-globose, (white)?,  $6-7\mu$  diam., borne on clavate-cylindrical basidia  $20-22 \times 6\mu$ , with 4 erect, slender sporophores about  $6\mu$  long.

From *H. repandum*, to which it is closely allied, it differs in its decurrent aculei and tougher substance.

*Fremellodon pusillum* E. & E.

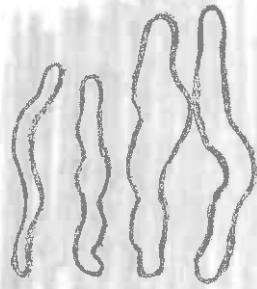
On rotten wood, among coniferous trees, Tracyton, Wash., Dec., 1893 (Adella M. Parker, No. 212).

Small, stipitate, gelatinous, white and nearly transparent. Pileus subreniform, membranaceous,  $1-1\frac{1}{2}$  cm. across, smoky-brown above and sparingly clothed with weak, pale hairs. Teeth not crowded, white, subcompressed, about  $\frac{1}{2}$  mm. long, narrowed gradually from the base, with a few obtuse, short, lateral, tuberculiform branches or processes. Spores, ovate-globose,  $5-6 \times 3\frac{1}{2}-4\mu$ , consisting of a thin, transparent sack containing a single, large globose nucleus. Stipe lateral, cylindrical, slender, equal, hirt-pubescent, 1 cm. long, 2 mm. thick, smoky-brown.

*T. hirneoloides* B. & C. is a much coarser, stouter plant, with stipe 18 mm. long, 8 mm. thick at the base.

*Crepidotus albidus* E. + E.

from Colorado, marked "type" (but  
Kauffman + Muvill say <sup>this type</sup> A is from Ann Arbor)



Ch - x 1000

CREPIDOTUS ALBISSIMUS Murr.

(Type - F 17281)

On hardwood branch, in woods, Gainesville, Fla., coll. & det. Murrill, June 28, 1938.

Pileus 8-12 x 6-8 mm, convex, reniform, dry, silky-fibrillose, very white, unchanging, margin even, ~~revolving~~ incurved. Context white, unchanging.

Lamellae, adnate, white, whitish when dry, rather broad behind, medium distant, inserted, edges fimbriate.

Spores 5.3-7 x 3.5-4.5  $\mu$ , ellipsoid or subovoid, smooth, pale brown. Basidia 22-28 x 6-7  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 30-83 x 4-7  $\mu$ , cylindric, slender-clavate, at times subventricose, apices rounded, or capitate, frequently blunt. Gill trama subparallel, hyphae 3-5  $\mu$  broad. Pileus trama distinctive: the inner three-fourths or more densely interwoven, the outer one-fourth more loosely organized and pale, (~~suggesting some gelatinization~~). Cuticle of several layers of repent hyphae, bearing a turf of slender (2.5-5  $\mu$ ), colorless hyphae, the terminal elements, in some instances, as more or less clavate pilocystidia. Clamp connections present.

CREPIDOTUS ALBISSIMUS Murrill

Mycologia 35:530. 1943

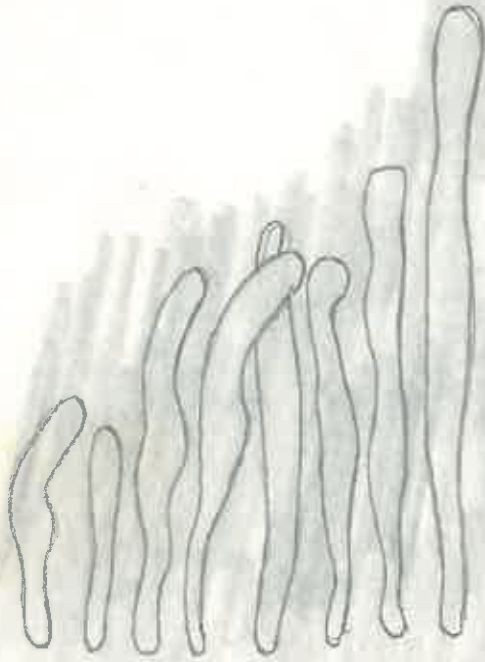
"Pileus reniform, convex, attached by a tubercle, gregarious, 8-12 x 6-8 mm.; surface dry, smooth, silky-fibrillose, very white and unchanging; margin entire, even, fibrillose, incurved; context white, unchanging; lamellae adnate, rather broad behind, medium distant, inserted, fimbriate on the edges, white, whitish when dry; spores ellipsoid, smooth, nonguttulate, about 5-7 x 3-4  $\mu$ .

"Type collected by W. A. Murrill on a dead hardwood branch in a high hammock at Gainesville, Fla., June 28, 1938 (F 17281). A striking pure-white species which does not become discolored on drying.

"According to Singer, 'Cuticle of repent, filamentous, thin hyphae with clamp connections; cystidia none; cheilocystidia scattered, subfilamentous, hyaline, 4-5  $\mu$  broad; basidia 24-30 x 6-7  $\mu$ ; spores brownish, smooth, with simple, rather thin wall, 6.8-7.3 x 4-4.7  $\mu$ .'"

*Prepodotus albissimus* Murv.

Type



Ch - x 1000



Fur

Cuticle

Loosely organized

Densely  
interwoven

Pileus trama

Agaricus (Crepidotus) alveolus Lasch. Fr. Ep. p. 210.

Note below a photo of p. 291, Jour. Fenn. Soc. 10:  
1868: Fungi Cubensis, Berkeley M.D. and  
M.A. Curtis. Report it from U.S. + Europe.

71. A. (CREPIDOTUS) ALVEOLUS, Lasch. Fr. Ep. p. 210. (37.)  
On dead wood. Hab.: United States, Europe.

Singer (Agar.) places this with those species  
lacking clamps.

CREPIDOTUS AMARUS Murr.

Mycologia 35:430. 1943

Pileus 5-8 mm broad, convex, not resupinate at first, reniform or subcircular, uniformly white, unchanging, pulverulent, margin at times slightly striate. Context thin, white; taste very bitter at once.

Lamellae adnexed, broad at the base, distant, inserted, whitish, becoming fulvous, edges beaded, fimbriate.

Stipe always present, eccentric, short, slender, curved, white.

Spores 6-8.5 x 5-6  $\mu$ , ellipsoid to ovoid, equilateral, wall thick, smooth. Basidia 18-24 x 4-5  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 33-48 x 3-7  $\mu$ , clavate to cylindric, more or less subcapitate, base at times enlarged, often crooked. Gill trama slightly interwoven, hyphae 3-4  $\mu$  broad. Pileus trama interwoven. Cuticle of repent hyphae, bearing scattered to numerous (rarely a turf) pilocystidia, 35-55 x 2.5-4  $\mu$ , filamentous, often ~~crooked~~ <sup>somewhat flexuous</sup>, apices at times forked. Clamp connections present.

The description of macroscopic characters is from Murrill; that of microscopic characters is based on a study of the type.

The type on dead grape-vine, Gainesville, Florida, June 28, 1938, No. F 17226.

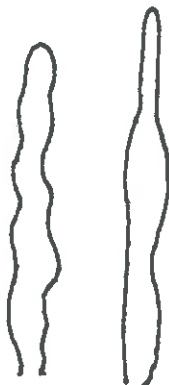
CREPIDOTUS AMARUS Murrill  
Mycologia 35:430-431. 1943

"Pileus reniform or subcircular, convex, not resupinate at first, gregarious, 5-8 mm. broad; surface uniformly white, unchanging, pulverulent, margin entire, slightly striate at times; context thin, white, very bitter at once; lamellae adnexed, broad at the base, distant, inserted, whitish with beaded, fimbriate edge, becoming fulvous with white edge; spores ellipsoid or ovoid, smooth, pale yellowish-brown, many uniguttulate,  $5-7 \times 4-5 \mu$ ; stipe always present, eccentric, short, slender, curved, white.

Habitat and Distribution. - On dead grapevine, Florida, June.

Discussion. - Murrill says it is noteworthy because of its small size, its bitter taste, and its small, curved stipe.

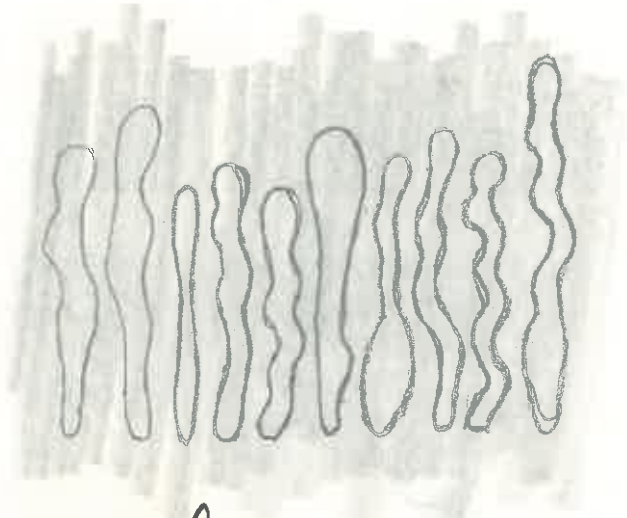
Singer (Lilloa 13:63) says spores of the type are  $6.5-7.3 (8.3) \times 5.5-6.3 (6.6) \mu$ , smooth; cheilocystidia claviculate,  $32-54 \times 4-5.7 \mu$ . With clamps. Epicutis of repent hyphae,  $3.3-3.6 \mu$  broad.



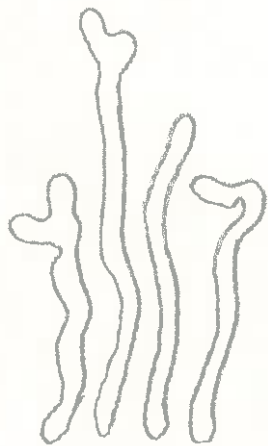
Ch. (adapted from Singer)



*Orepidotus amarus* Muer.  
Type



Ch - x 1000



Pilo - x 1000

CREPIDOTUS AMYGDALOSPORUS Kuhner

(H-25540)

on hardwood (maple), near Cherokee, N. C., June 7, 1963

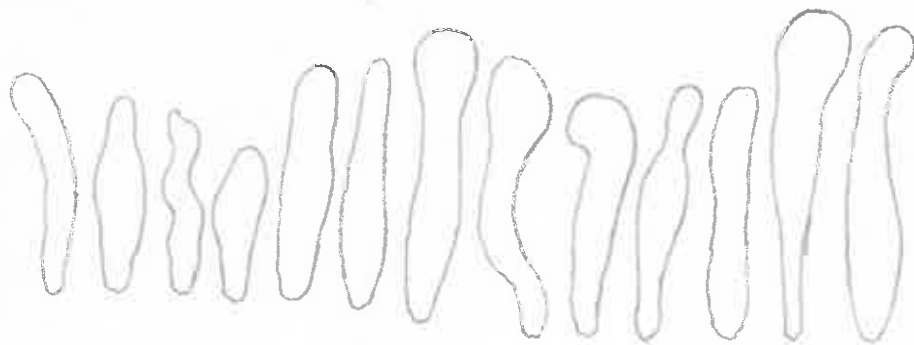
Pileus 5-25 mm broad, conchate, finally expanded fan-shaped, semi-orbicular, white, densely white villose or silky. Context white, thin.

Lamellae white, finally tinged brownish, subdistant, broad, many lamellulae, edges ventricose.

Stipe eccentric, 1 mm x 0.3 mm, white, disappearing.

Spores 7-9 (10) x 4-5.5  $\mu$ , ellipsoid to ovoid, slightly or not at all inequilateral in profile, obscurely punctate, yellowish brown in 2 % KOH (spore print failed), thin walled. Basidia 24-30 x 6-7 (8)  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 21-<sup>43</sup>~~40~~ x 4-10  $\mu$ , filamentous, clavate, obclavate, slightly ventricose, at times capitate, a few flexuous. Gill trama slightly interwoven, hyphae 4-7  $\mu$  broad. Pileus trama interwoven. Cuticle of repent hyphae, bearing a turf of colorless hyphae, 2-3  $\mu$  broad. Clamp connections present, few, small.

*Orepidotus* H-25540  
*amygdalosporus*



Ch - x 1000

CREPIDOTUS AMYGDALOSPORUS Kühner

On fallen dead branch of deciduous tree, Amsterdam, Netherlands,  
leg. & det. E. L. v. Waveren, Dec. 8, 1960. (Specimen borrowed  
from *Biden*,  
and studied Nov. 1963.)

(Notes by Bas)

Cap more or less 20 mm broad and 18 mm long, fan-shaped,  
buffy and felted above. *Kühner + Rom. says it is pure white.*

Lamellae brownish buff, without pink.

Spores 8-9.8(-11) x 4.7-6.3  $\mu$ , ellipsoid, subamygdaliform.

(Notes by Hesler)

Spores 7-9(10) x 4.5-5(5.5)  $\mu$ , ellipsoid, inequilateral in  
profile, obscurely punctate, pale clay color in deposit. Basidia  
24-30 x 6-7  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 25-48  
x 5-10  $\mu$ , bottle-shaped, more or less cylindric and constricted,  
ventricose, apices at times capitate or with a lateral knob, or  
clavate. Gill trama subparallel or slightly interwoven, hyphae  
5-14  $\mu$  broad. Pileus trama interwoven. Cuticle undifferentiated,  
the surface bearing scattered, colorless hyphae, the terminal elements  
occasionally cystidioid. Clamp connections present.

This should be compared with: (1) Resinosae, Sm-50942;  
(2) Crepidotellae, Sm-29546 and Sm-49768.

Near C. subtilis P. D. Orton (T.B.M.S. 43: 2: 221. 1960).

CREPIDOTUS AMYGDALOSPORUS Kühner

On fallen dead branch of deciduous tree, Amsterdam, Netherlands,  
leg. & det. E. L. v. Waveren, Dec. 8, 1960. Specimen borrowed  
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Spores 8-9.8(-11) x 4.7-6.3  $\mu$ , ellipsoid, subamygdaliform.

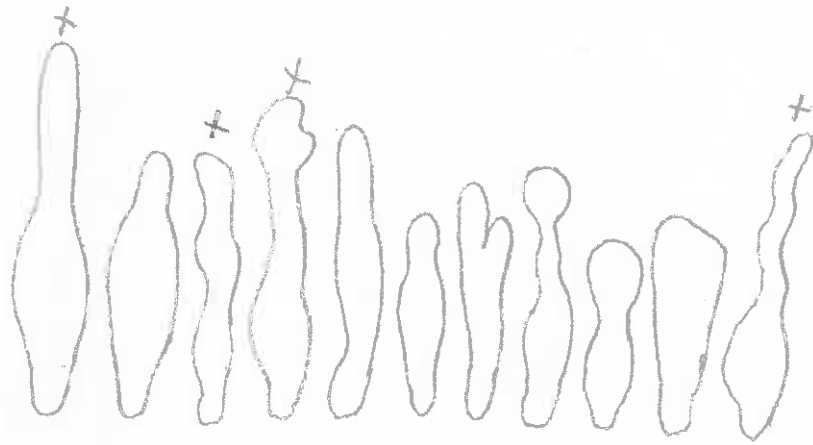
(Notes by Hesler)

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This should be compared with: (1) Resinosae, Sm-50942;  
(2) Crepidotellae, Sm-29546 and Sm-49768.

Near C. subtilis P. D. Orton (T.B.M.S. 43: 2: 221. 1960).

*Gepidotus amygdalosporus* Kühner  
(Seq.-det. E. v. Waveren, Leiden, Dec 8, 1960)



Ch - x 1000

CREPIDOTUS ANTILLARUM (Pat. apud Duss~~x~~) Singer  
Lilloa 13:62. 1947.

Crepidotus cinchonensis Murr., Mycologia 5:30. 1913.

Tremellopsis antillarum Pat. apud Duss,

Pileus reaching 2 cm broad, convex to plane, reniform to orbicular, dull watery-white, drying cinnamon buff, pulverulent to nearly glabrous, base sometimes strigose, attached by a lateral or eccentric point, or by the vertex and appearing resupinate when growing on the lower side of a log or trunk, dry, margin striate. Context thin, soft.

Lamellae radiating from a lateral or eccentric point, dull watery white, becoming subfulvous, thin, crowded, ventricose, broad in the middle.

Stipe none.

Spores 7.5 - 10.5 x 5-7  $\mu$ , mostly 8 - 9 x 5 - 5.5  $\mu$ , ellipsoid, smooth dark clay color. Basidia 20-38 x 6-8(9)  $\mu$ , 2-4-spored. Pleurocystidia none; cheilocystidia 25-50 x 5-9 $\mu$ , somewhat variable: ventricose, clavate, often more or less constricted, and at times subcapitate, many collapsed against the gill edge. Gill trama subparallel, hyphae 4-8  $\mu$  broad. Pileus trama interwoven. Cuticle of repent hyphae, with or without erect, scattered, colorless, straight, septate hyphae. Clamp connections present on the epicuticular hyphae,

and the tomentum at the base of the pileus.

Habit, Habitat, and Distribution - On dead wood of deciduous trees, Tropical America, and including South Florida. (Singer, 1947).

Material Studied - JAMAICA: Murrill 610, the type of C. cinchonensis, from Cinchona, Dec. 25 - Jan. 8, 1908-09/

Observations - The description of microscopic characters above is based on a study of the type of C. cinchonensis Murr.

Patouillard originally described this species as Tremellopsis antillarum (probably in Fl. Crypt. Fr., 1904). Singer (1947), following a suggestion by Donk, and after studying Patouillard's and Murrill's types, proposed the new combination, C. antillarum.

Singer (1947), describing the microscopic characters, says the pileus trama is subgelatinous and that the hyphae gelatinize slightly in the manner of the boleti, with thin and thick hyphae side by side.



CREPIDOTUS ANTILLARUM (Pat.) Singer

[=Tremellopsis antillarum Pat.=C. cinchonensis Murr.]

(Type, from Patouillard Herbarium, No. 224,  
Guadeloupe; from Farlow Herbarium)

Spores 7-9 x 5-6  $\mu$ , ellipsoid, some slightly sub-amydali-  
form, smooth. Clamp connections found on the hyphae of the  
pileus trama. No sections were made, so that other observations  
were not possible.

A second collection, No. Fl472, from the Farlow Herbarium,  
by Singer is labelled C. antillarum (Pat.) Singer f. bisporus,  
on frondose log in tropical hammock, Dade Co., Florida, Nov.  
9, 1942.

On examination, the material was found too sparse for  
study.

CREPIDOTUS CINCHONENSIS Murr. = *antillarum*

Type

(No. 610, collected by W. A. Murrill & Edna L. Murrill, Dec. 25-Jan. 8, 1908-9, Cinchona, Jamaica)

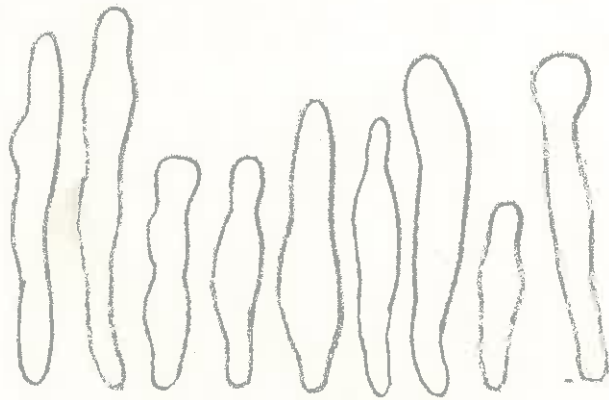
Spores 7.5-10 x 5-7  $\mu$ , mostly 8-9 x 5-5.5  $\mu$ , ellipsoid, smooth. Basidia 26-38 x 6-8  $\mu$ , 2-4-spored. Pleurocystidia none; cheilocystidia 25-50 x 5-9  $\mu$ , somewhat variable: ventricose, clavate, often more or less constricted, and at times subcapitate, many ~~(most?)~~ collapsed against the gill edge. Gill trama subparallel, hyphae 4-8  $\mu$  broad. Pileus trama interwoven. Cuticle a cutis, hyphae repent, with or without erect, scattered, colorless, septate hyphae. Clamp connections present on the epicuticular hyphae and the tomentum at the base of the pileus.

Singer (Lilloa 13:61-62) discusses this species, and concludes that it is the same as Tremellopsis antillarum /Pat. apud Duss/, which Donk called an agaric. Singer studied Murrill's type, collected it in South Florida, and proposed (p. 62): Crepidotus antillarum (Pat. apud Duss) Singer. comb. nov. (Crepidotus cinchonensis Murr.).

In his description of Murrill's type, he says that the pileus trama is rather thin, subgelatinous (not truly gelatinous in the manner of C. mollis or C. uber but the hyphae all slightly gelatinizing in the manner of the boleti), with thin and thick hyphae side by side. (Note: In my observations I was unable to observe any gelatinization such as Singer describes.-L.R.H.)

*Orepidotus cinchonensis* Muir.

Type



Ch - x 1000

CREPIDOTUS CINCHONENSIS Murr.

(Coll. by Murrill, No. 686, Morce's Gap, Jamaica,  
Dec. 29, 30, Jan. 2, 1908-9)

This is not C. cinchonensis! It has a broad ixocutis,  
typical of C. mollis. But, the hyphae have clamp connections  
which would seem to exclude it from mollis.

CREPIDOTUS APPALACHIANENSIS sp. nov.

(No. 12264)

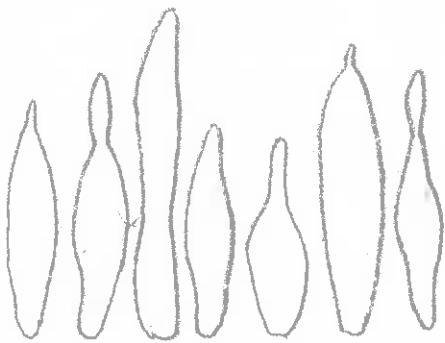
Pileus 1.5-2.5 cm broad, whitish, glabrous, or (under lens) a few scattered brownish fibrils, flabelliform, margin even.

Lamellae close, broad, white then brownish.

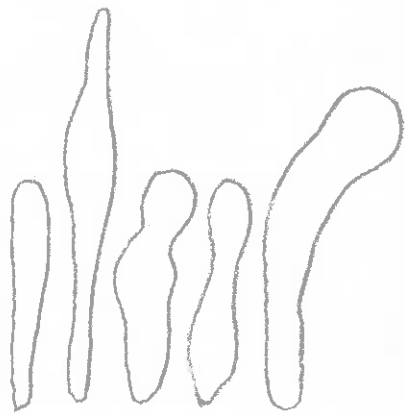
Stipe none.

Spores 5-6.5 (7)  $\mu$  diameter, globose, punctate, double-walled, the outer wall darker. Basidia 19-25 x 6.5-8  $\mu$ , 2-4-spored. Pleurocystidia 25-42 x 6-9  $\mu$ , fusoid, ventricose, at times subcylindric with a contraction toward the middle, apices more or less acute, at times mucronate or short-appendiculate; cheilocystidia 30-52 x 5-10  $\mu$ , clavate, ventricose, at times subcapitate. Gill trama subparallel, hyphae 4-8  $\mu$  broad. Pileus trama interwoven. Cuticle repent, with a few scattered, brown, incrusting hyphae. Clamp connections rare on the cuticular hyphae.

*Gepidostus* No. 12264  
*appalachianensis*



~~Pl.~~ Pl. x 1000



Ch - x 1000

CREPIDOTUS APPALACHIANENSIS sp. nov.

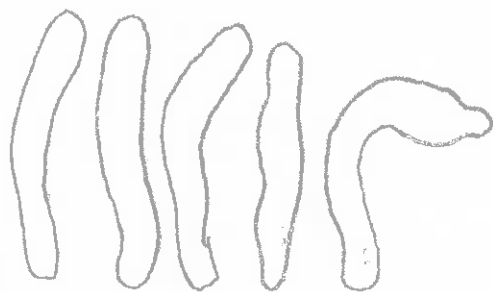
(H-17492)

Pileus 1.5-3 cm broad, sessile, whitish, flabelliform or reniform, appearing glabrous to pubescent, or with some brownish fibrils, margin stritulate.

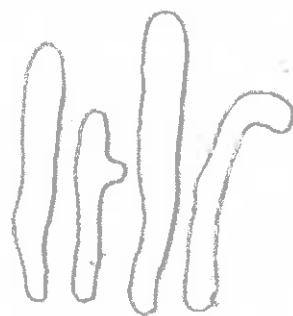
Lamellae white then brown, broad, close.

Spores 5-6 (6.5)  $\mu$  in diameter, punctate, wall double, the exosporium darker and thicker. Pleurocystidia 30-45 x 5-8  $\mu$ , cylindric to subclavate, at times curved or crooked; cheilocystidia 24-40 x 3-6  $\mu$ , cylindric to clavate. Gill trama subparallel, hyphae 5-8  $\mu$  broad. Pileus trama very loosely interwoven. Cuticle an opaque or dingy zone of 4-5 layers of repent hyphae, bearing a turgid hyphae of two types: (a) colorless, 4-8  $\mu$  broad, the terminal elements cystidioid; (b) brown, 7-10  $\mu$  broad at times, with incrustations. Clamp connections on the epicuticular hyphae.

*Orepidotus* H-17492  
*appalachianensis*



Pl - x 1000



Ch - x 1000



CREPIDOTUS APPALACHIANENSIS sp. nov.

(No. 18679, Type)

Pileus 0.8-2.5 cm broad, convex to sub-conchate, pallid to "chamois," brownish-fibrillose to squamulose, margin even. Context thin, white.

Lamellae radiating, close, medium broad to broad (4-6 mm), whitish then pinkish-buff, finally brownish, edges faintly fimbriate.

Stipe none; pileus laterally attached, white villose-strigose at point of attachment.

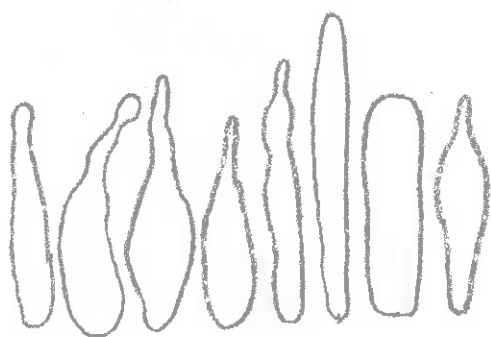
Spores 4.5-6 (7)  $\mu$  diameter, globose, more rarely sub-globose, minutely punctate, brown under microscope. Basidia 28-34 x 5-7  $\mu$ , 4-spored. Pleurocystidia 27-40 (60) x 3-7  $\mu$ , obclavate, ventricose, flask-shaped, cylindric, or cylindric-clavate, often tapering above or appendiculate, projecting only slightly, and inconspicuous; cheilocystidia 28-48 x 4-10  $\mu$ , clavate, at times more or less constricted. Gill trama sub-parallel, hyphae broad (5-12  $\mu$ ). Pileus trama interwoven. Cuticle repent, bearing numerous scattered (clustered in squamules), colorless erect hyphae, at times septate, the terminal elements as pilocystidia. The scales are composed of clusters of brown, spirally or ring-like incrustated hyphae. Clamp connections present on the colorless epicuticular hyphae. Lactifers present in the pileus and gill trama.

Crepidotus

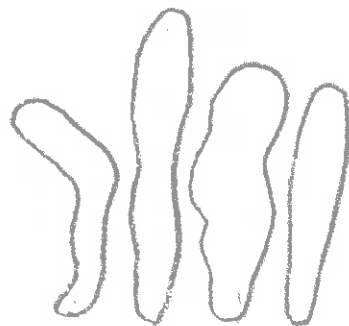
No. 18679

~~fulvifibrillosus Mart.~~

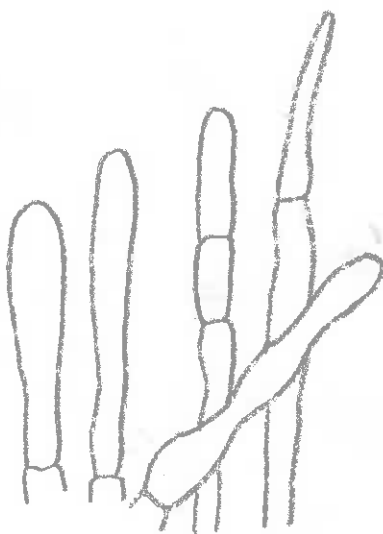
appalachianensis sp. nov. - Type



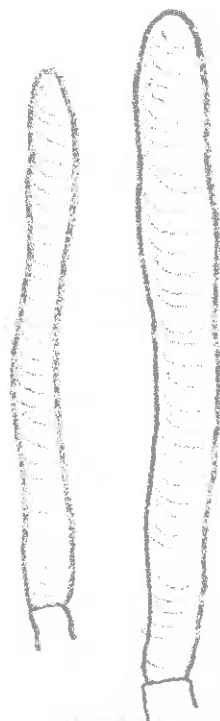
Pl. - x 1000



Ch. - x 1000



Pilo - x 1000  
(colorless)



Elements from  
brown fibrillose scale  
x 1000

*appalachianensis* sp. nov.

CREPIDOTUS H-21383

Pileus 1.5-3 cm broad, cuneate to flabelliform, pale yellowish, with fibrillose, tuft-like scales.

Lamellae radiating from base, close, medium broad, *white then* reddish-cinnamon (dried), edges more or less fimbriate.

Spores 5-7  $\mu$ , globose, few subovoid, rough. Basidia 26-31 x 6-7  $\mu$ , 4-spored. Pleurocystidia fusoid or clavate, appendiculate, 32-42 x 6-7  $\mu$ ; cheilocystidia 20-35 x 5-8  $\mu$ , clavate, ventricose. Gill trama subparallel or slightly interwoven, hyphae 5-8  $\mu$  broad. Pileus trama very loosely interwoven of broad hyphae (6-15  $\mu$ ). Cuticle of 4-5 layers of dingy hyphae with scattered hyphae of two types: (a) brown, some incrustated, 7-12  $\mu$  broad; (b) colorless, 8-20  $\mu$  broad. (Cuticle and pileus trama very similar to that of No. 17492.) Clamp connections on the colorless epicuticular hyphae.

*Orepidotus* ~~appalachianensis~~  
H-21383



Pl - x 1000



Ch - x 1000



21383 - *Grepidotus nephrodes* (B. & C.) Sacc.  
*appalachianensis*

(Pilei water-soaked, + fibrillose-scales are  
matted down + do not show.)

*appalachianensis*

CREPIDOTUS No. 21441

(cf. 18679)

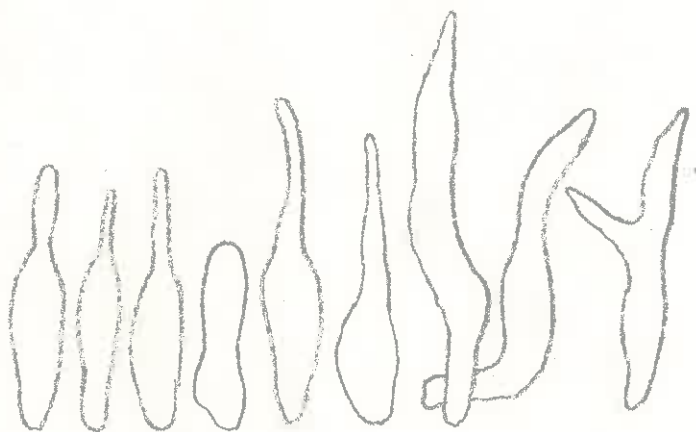
Pileus 1-2.5 cm. broad, semi-orbicular to flabelliform, white, with brownish fibrillose squamules, not viscid, margin even. Context whitish, rather thin.

Lamellae radiating from a lateral point, white then buff to brownish, medium broad, close, edges fimbriate.

Stipe none.

Spores 4.5-6  $\mu$ , globose, punctate. Basidia 21-33 x 6-8  $\mu$ , 4-spored. Pleurocystidia 25-53 x 4-8  $\mu$ , ventricose or bottle-shaped with a slender neck, or subfusoid-cylindric, more rarely forked; cheilocystidia clavate, at times subcapitate, 25-34 x 6-7  $\mu$ . Gill-trama subparallel, hyphae 5-10  $\mu$  broad. Cuticle a trichodermium, with some colorless, more or less erect hyphae, and scattered fibrillose scales composed of brown hyphae, some of which are incrustated. Clamp connections present on the epicuticular hyphae.

*Crepidatus appalachianensis*  
No. 21441



AP - x 1000



Ch - x 1000

CREPIDOTUS APPALACHIANENSIS sp. nov.

(H-21451)

Pileus hygrophanous, white (dry), watery -brownish (wet), fibrillose, margin striate (wet), even (dry). Context thin, white, soft; odor mild, taste mild, soon bitter.

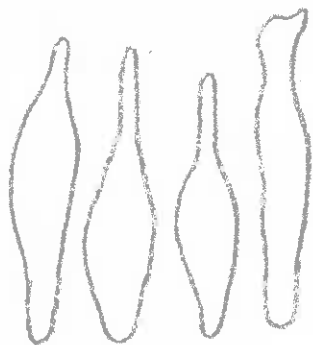
Lamellae decurrent, radiating from lateral point, close, linear, rather narrow, whitish then brownish, edges fimbriate.

Stipe none.

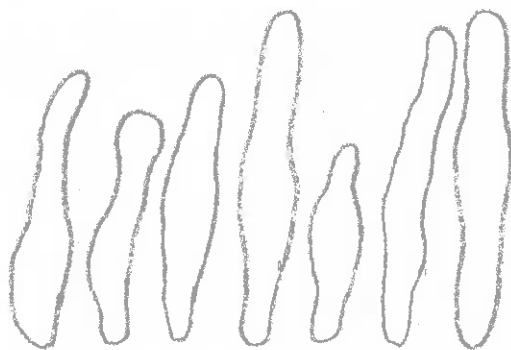
Spores 6-7 x 5-6  $\mu$ , globose to subglobose, brownish, punctate. Pleurocystidia 34-43 x 7-9  $\mu$ , ventricose or bottle-shaped with a slender neck, or more or less clavate, apex acute; cheilocystidia 25-45 x 5-8  $\mu$ , ventricose, cylindric, rarely subcapitate. Cuticle a trichodermium, most hyphae colorless, but with a few hyphae, in tufts, brownish; a few of both colorless and brown hyphae incrustated. Clamp connections present on epicuticular hyphae.



*Grepidatus* No. 21451  
*appalachianensis*



Pl - x 1000



Ch - x 1000

*appalachianensis*  
CREPIDOTUS No. 24851

Type

Photo

Pileus 10-47 mm., applanate, flabelliform, moist, pallid, densely tawny to dark brown fibrillose scaly, margin fibrillose, base white-strigose. Context white, thin; odor mild, taste soon astringent-bitter.

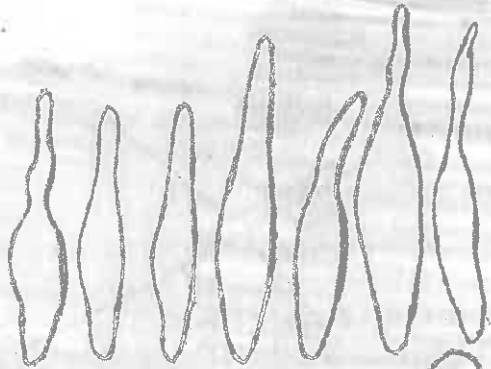
Lamellae narrowly attached to a lateral tubercle, radiating, white then brownish, narrow to medium broad, ventricose, close, many short, edges nearly even.

Stipe none; pileus attached laterally by a tubercle.

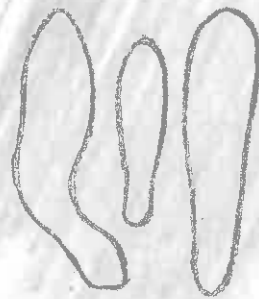
Spores 4.5-5.5<sup>(7-8)</sup>  $\mu$  diameter, globose, ~~Widely spaced~~  
finely punctate, brown. Basidia 26-32 x 6-7  $\mu$ , 4-spored (rarely 2-spored). Pleurocystidia 33-46 x 6-9  $\mu$ , ventricose with a neck, the neck occasionally constricted; cheilocystidia 24-36 x 6-9  $\mu$ , clavate, few, often projecting only slightly. Gill trama subparallel, hyphae 6-11  $\mu$  broad. Pileus trama interwoven. Cuticle repent, but with clusters of brown, septate, incrusting hyphae forming the fibrillose scales, and scattered colorless hyphae. Clamp connections present on the epicuticular hyphae, and the villose tomentum at the base of the pileus; and occasional on the brown scale hyphae. Lactifers in the pileus trama.

*Gepidostus fulvifimbriatus* ~~Kent~~  
appalachianensis  
No. 24851

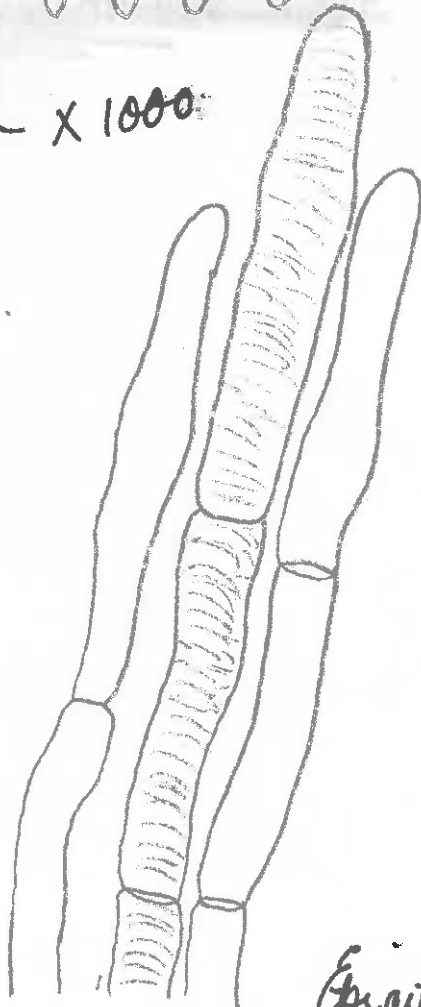
(Type)



Sp - x 1000



Ch - x 1000



Epicuticular scales hyphae - x 1000

*var. globigera (Berk) Pat*

CREPIDOTUS APPLANATUS (Pers. ex Fr.) Kummer

Der Führer in die Pilze, p. 74. 1871

Agaricus applanatus Pers., Obs. Myc. 1:8. 1796.

Agaricus applanatus Pers. ex Fr., Epicr. Myc., p. 210. 1836.

Pileus 1-4 cm. broad, flabelliform, reniform, semi-orbicular to cuneate, convex, then plane, white, hygrophanous, darker when wet, glabrous, usually tomentose behind, margin striatulate when wet, even when dry. Context thin, white; odor and taste mild (in No. 24852, odor slightly pungent, taste somewhat astringent).

Lamellae narrowly adnate-decurrent, white then pale brownish, crowded, very narrow, edges fimbriate or nearly even.

Stipe none or rare, ~~or~~ with only a stipe-like prolonged base (in No. 21902, there is a lateral stipe 3-5 mm x 2-3 mm).

Spores (4)4.5-6 (7)  $\mu$ , globose, subglobose, or at times somewhat ovoid, finely punctate, brown. Basidia 20-27 x (4) 5-7  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia somewhat variable in size and shape (from collection to collection), (18) 30-46 x 5-12  $\mu$ , clavate, ventricose with a tapering apex (more or less appendiculate), cylindric, at times slightly constricted and subcapitate. Gill trama subparallel, hyphae 4-15  $\mu$  broad. Pileus trama interwoven. Cuticle a cutis, often with scattered, short, erect or semi-erect, colorless hyphae, <sup>the terminal elements at times as pilocystidia.</sup> Clamp connections on the <sup>epithecium and those</sup> hyphae comprising the villose tomentum at the base of the pileus.

Habit, habitat, and distribution. - On logs of deciduous, more rarely coniferous, trees, in North America, Europe, June-August.

Material studied. - NEW YORK: Hesler 9034; NORTH CAROLINA: Hesler 5115, 21902, 22080, 23088, 23089, 24907; TENNESSEE: S. A. Cain 16336; Hesler 3673, 5009, 8099, 8934, 16336, 21400, 24852.

Observations. - In the absence of a type, Singer (1947) suggests the typification of Jossierand's specimen as lectotypical material. Jossierand (1937) concludes that C. applanatus sensu Quelét, and sensu Rea is really C. fragilis Joss. Among other differences, the spores of C. fragilis are ellipsoid. It is close to C. fulvifibrillosus Murr. in which the pileus is conspicuously brownish fibrillose-scaly.

Agaricus (Crepidotus) globigera B.

Jour. Linn. Soc. 13: 158. 1873?

Photostat of original description:

28. A. (CREPIDOTUS) GLOBIGERA, B. Pileo flabelliformi v. reniformi  
basi attenuato, molli, glabro; lamellis tenuibus ochraceis, sporis  
globosis.

Wangaratta. About an inch long and wide. Spores '00025 in diame-  
ter; different from any thing I have seen in the subgenus.

CREPIDOTUS APPLANATUS sensu Josserand

Bull. Soc. Myc. de France 53:221. 1937

(Translated by H.A.H.)

Pileus 15-40 mm., as broad and sometimes broader than long, spathulate-reniform-auriculate, plane, hygrophanous, non-viscid, merely lubricous and smooth to the touch; for a long time ivory-white, then hyaline-isabelle, dingy isabelle-grayish; <sup>even at times</sup> ~~sometimes even~~ ochraceous when dry; glabrous. Margin thin, sub-incurved in very young stage, then merely rounded; regularly or moderately <sup>incurved?</sup> sinate; opaque, faintly striate (wet). Cuticle poorly differentiated.

Flesh thin, soft, white when dry, then isabelle (wet), with no gelatinous zone.

Lamellae very close, very unequal: 5-11 lamellulae; however <sup>only</sup> ~~mostly~~ with very rare forking; a few <sup>(lamellae)</sup> broad or moderately broad, thin, attenuated toward the margin, adnate behind or rounded-free; a little soft, for a moderately long time white, then argillaceous-rusty (ochraceous when dry). Edges entire, concolorous.

Stipe at first central only when very young (1 mm. in diameter), then lateral and reduced a bit: 2-5 x 2-5 mm., white or dingy ivory, hispid.

Spores in deposit: dull-ochraceous (darker than the lamellae).

Basidia 4-spored, small, 22-27 x 6-8  $\mu$ , with small sterigmata.

Spores exactly round, 4.8-6  $\mu$ , punctate with (by) fine warts, delicate but very definite; one counts 25-35 (warts) on the hemispore; an apiculus on the upper surface; no hilar plage.

Pleurocystidia none.

Cheilocystidia moderately numerous, variable, but always common; obtuse, slightly swollen here and there, sometimes slightly capitate; claviculate, etc., 32-40 x 8-10  $\mu$ .

Trama of the middle-zone (medistrate) filamentous, of hyphae 4-12  $\mu$  broad, sub-regular, delicate, slightly undulating. Subhymenium cellular.

Cuticle of the pileus filamentous, of slender hyphae, 4-10  $\mu$  broad, interwoven (but) with a certain radial arrangement; a few (hyphae with) free ends, very slightly capitate, scarcely erect.

Odor and taste rather slightly agreeable, but faint.

Habitat and Distribution. - On dead and decaying trunks of Pinus and Fagus. Grande Chartreuse (Isère), 21-8-1934, in company with MM. R. Kühner and J. Boursier. — Fontainebleau (Seine-et-Marne), 19-10-1934. — All around Plombières (Vosges), in August and September, 1935.



CREPIDOTUS APPLANATUS Sensu Jossierand

(U.T.-25188)

Spores 4.3-5.5 x 4.3-5.5  $\mu$ , globose to subglobose, punctate. Basidia 20-28 x 5-6  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 26-~~32~~<sup>40</sup> x 4-~~8~~<sup>9</sup>  $\mu$ , cylindric, clavate, at times subfusoid, faintly capitate or with a neck. Gill trama subparallel, hyphae 5-8  $\mu$  broad. Pileus trama interwoven. Cuticle repent with scattered colorless pilocystidia which are clavate, subfusoid-cylindric, strangulate-cylindric, <sup>33-56 x 5-9  $\mu$ , and subcapitate,</sup> or irregular. Clamp connections present on the epicuticular hyphae.

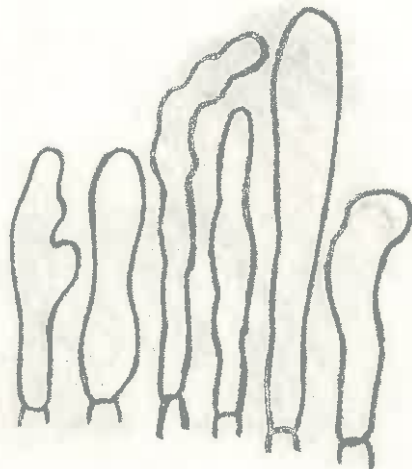
The difference, if any, between this and some (all?) of our American collections is in the range in size and variability of shape of the cheilocystidia.

Jossierand (Bull. Soc. Myc. Fr. 53:218-221. 1937) studied C. applanatus, and concluded that the concept of Persoon, Fries, Karsten, Kauffman, and Bresadola is correct; and that of Quelet and of Rea is what Jossierand describes as a new species, C. fragilis. His description and drawings seem to agree very well with American collections: cheilocystidia 32-40 x 8-10  $\mu$ , clavate, more or less constricted, ventricose. He reports pilocystidia (but does not call them by that name) as slightly capitate.

*Grepidotus applanatus* sensu Josseraud  
U-T 25188 (from Josseraud)



oh - x 1000



*Pilocystidia* - x 1000

3673

CREPIDOTUS APPLANATUS (Fr.) Kummer

*var. applanatus*

Pileus 10-16 mm. broad, dimidiate, cuneate, or semi-orbicular, white, glabrous, hygrophanous, moist, not viscid, at times prolonged laterally into a stipe-base. Context white; odor and taste mild, agreeable.

Lamellae decurrent, white then brownish, narrow, close, edges slightly fimbriate.

Stipe none.

Spores 4-5  $\mu$  diam., globose, distinctly punctate, brown under 'scope. Basidia 20-26 x 4-5  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 20-35 x 6-8  $\mu$ , variable: clavate, ventricose and apex tapering or appendiculate. Gill trama subparallel, hyphae 4-13  $\mu$  broad. Pileus trama interwoven. Cuticle a cutis, with a few scattered, more or less erect, short, colorless hyphae.

See: Jossierand, Bull. Soc. Myc. Fr. 53:221. 1937. A full description.

5115

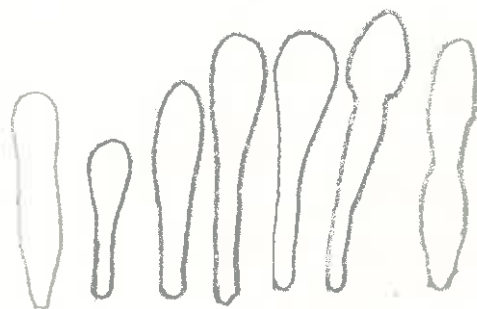
CREPIDOTUS APPLANATUS (Fr.) Kummer

*var. applanatus*

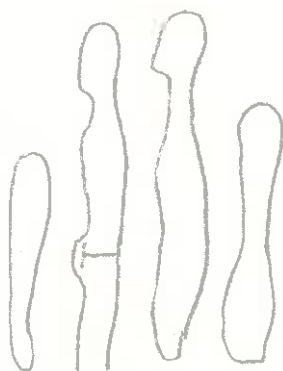
Spores 4.5 5.5  $\mu$ , globose, punctate. Basidia 20-24 x 5-6  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia clavate, subventricose, rarely sub-capitate, 18-37 x 5-8  $\mu$ . Cuticle of repent hyphae, with scattered pilocystidia, 28-45 x 5-8  $\mu$ , clavate, subventricose, at times subcapitate. Clamp connections present.

*Orepidotus appplanatus* (Fr.) Kummer

No. 5115



Ch - x 1000



~~P~~ Pil - x 1000

8099

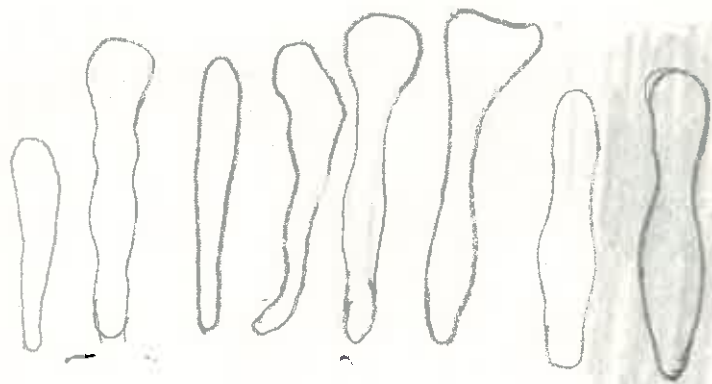
CREPIDOTUS APPLANATUS (Fr.) Kummer

*var. applanatus*

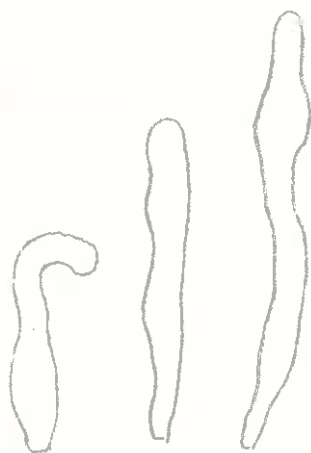
Spores 4.5-5.5  $\mu$ , broad, globose, rough. Pleuro-cystidia none; cheilocystidia clustered, clavate, subventricose, at times subcapitate, 27-44 x 5-12  $\mu$ . Gill trama subparallel. Cuticle of repent hyphae, bearing scattered more or less hyphoid pilocystidia, 35-60 x 5-7  $\mu$ . Clamp connections present.

*Orepidotus applanatus* (Fr.) Kummer, <sup>var. applanatus</sup>

No. 8099



Ch - x 1000



9034

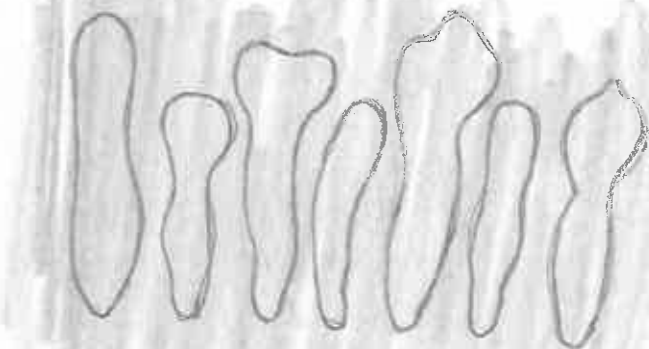
CREPIDOTUS APPLANATUS (Fr.) Kummer

var *applanatus*

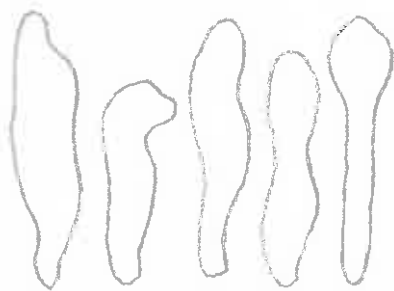
Spores 4.5-5.5  $\mu$ , globose, a few sub-ovoid, punctate.  
Basidia 20-24 x 6-7  $\mu$ , 4-spored. Pleurocystidia none;  
cheilocystidia clavate-subcapitate, ventricose, 30-43 x  
6-12  $\mu$ . Gill trama subparallel. Pileus trama interwoven.  
Cuticle of repent hyphae, with sparsely scattered pilocystidia,  
27-35 x 6-9  $\mu$ , clavate, ventricose. Clamp connections present.



*Gregidotus applanatus* (Fr.) Kummer var.  
*applanatus*  
(H-~~938~~9034)



Ch - x 1000



Pib - x 1000

*Crepidotus applanatus*  
CREPIDOTUS APPLANATUS (Fr.) Kummer

PHOTO

(H-21400)

Spores 4.3-5  $\mu$ , rarely (less than 1%) up to 6  $\mu$ ,  
globose, punctate. All other microscopic characters  
typical.



*Orepidotus appplanatus* (Fr.) Kummer var. *appplanatus*

- X about  $\frac{4}{3}$

CREPIDOTUS APPLANATUS (Fr.) Kummer

*rar applanatus*

(H-21902)

Spores 4.2-5  $\mu$ , globose, punctate. All other  
characters typical.

CREPIDOTUS APPLANATUS (Fr.) Kummer

var *applanatus*

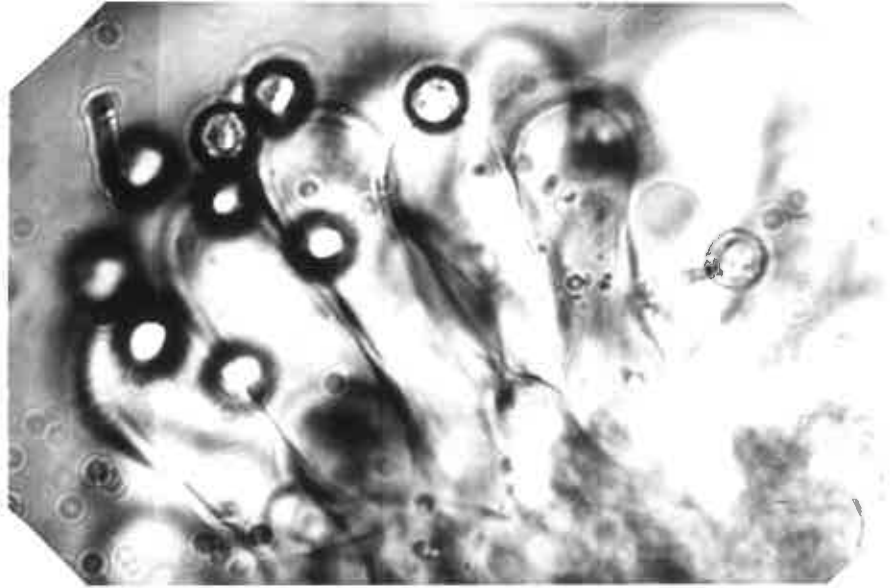
(H-22080)

Spores 4-5  $\mu$ , globose, punctate. Cheilocystidia  
and other microscopic characters typical.



*Gepidotus appplanatus* (Fr.) Lummus var. *appplanatus*

- x about  $\frac{5}{6}$



*Crepidotus applanatus* (Fr.) Kummer -  
Cheilocystidia from No. 22080

CREPIDOTUS APPLANATUS (Fr.) Kummer

*var applanatus*

(H-23089)

Spores 4.2-5.3  $\mu$ , globose, punctate. All microscopic characters typical; cheilocystidia 30-40 x 5-9  $\mu$ . Pilocystidia 28-50 x 5-7  $\mu$ . Clamps present.



24852

CREPIDOTUS APPLANATUS (Fr.) Kummer

Photo

*9241 ~~applanatus~~*

Pileus 1-3 cm., flabelliform, white, hygrophanous, glabrous except the white-fibrillose base, margin faintly striatulate. Context extremely thin, white; odor slightly pungent, taste somewhat astringent.

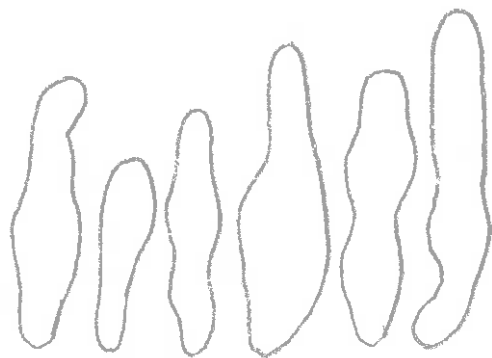
Lamellae decurrent, radiating from a lateral tubercle, close, narrow, linear, many short, edges denticulate.

Stipe none; attached by a lateral tubercle.

Spores (4) 4.5-5.5  $\mu$  diam., globose, finely punctate, brown under'scope. Basidia 24-27 x 6-7  $\mu$ , 4-spored. Pleuro-cystidia none; cheilocystidia <sup>25-44 x 6-12  $\mu$ ,</sup> clustered, clavate, often more or less constricted to bottle-shaped or ventricose. Gill trama subparallel, hyphae 5-9  $\mu$  broad. Pileus trama interwoven. <sup>the cuticular hyphae and the</sup> Cuticle repent. Clamp connections present on villose-tomentum <sup>^</sup> at the base of the pileus.

*Gepidostus applanatus* (Fr.) Kummer

No. 24852



Ch - x 1000

<

24907

CREPIDOTUS APPLANATUS (Fr.) Kummer

*non glabrigera*

Photo

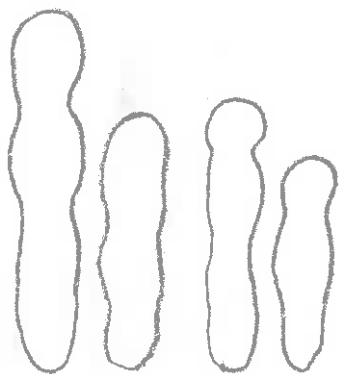
Pileus 10-22 mm. broad, hygrophanous, white appanate, glabrous but appearing appressed fibrillose, base villose-strigose, striatulate. Context whitish, thin; odor mild, taste becoming slightly acidulous-sub-bitter.

Lamellae radiating from a lateral tubercle, white, then flesh, close, <sup>narrow in front,</sup> rather broad <sup>behind or toward the base,</sup> many lamellulae.

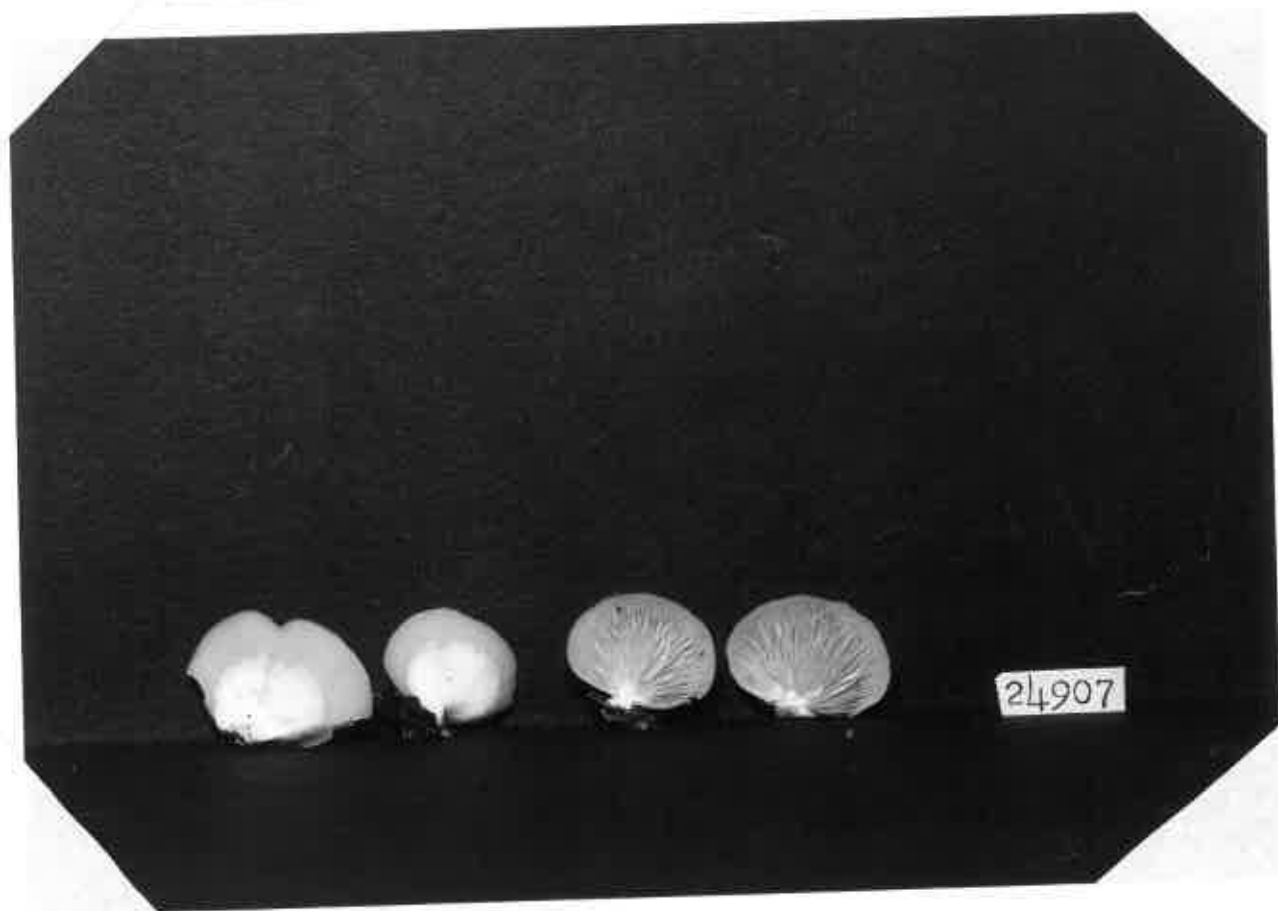
Stipe none; pileus laterally attached by a tubercle which is more or less densely villose-strigose.

Spores <sup>7</sup>5-~~8~~ x <sup>6.5</sup>4.8-~~8~~  $\mu$ , globose, at times slightly ovoid or subglobose, minutely punctate, brown. Pleurocystidia none; cheilocystidia 28-46 x 7-8  $\mu$ , clavate to broadly subcylindric, often slightly constricted and faintly subcapitate. Gill trama subparallel, hyphae 5-11  $\mu$  broad. Pileus trama interwoven. Cuticle of repent hyphae, with occasional more or less erect scattered hyphae. Lactifers in the pileus trama. Clamp connections on the <sup>cuticular hyphae and the</sup> tomentum at the base of the <sup>pileus:</sup> hyphae.

*Gepidotus appplanatus* (Fr.) Kummer  
No. 24907 var. *globigera*



Ch - x 1000



*Arepidotus appplanatus* var. *globiger* (Berk.) Face.

CREPIDOTUS AQUOSUS Murr.

Type (Earle No. 293)

(coll. by Earle, Oct. 30, 1902, on a decayed log, Rose Hill, Jamaica.)

Spores 4.5-7  $\mu$ , in diameter, globose, faintly punctate, brown on 2% KOH. Basidia unsuitable for study. Pleurocystidia none; cheilocystidia none found. Pileus trama interwoven. Cuticle a cutis, with a few more or less erect, scattered, short, colorless hyphae. Clamp connections present on the epicuticular hyphae and on the tomentum at the base of the pileus .

The material is very sparse, and , except for the spores, is unsatisfactory for study. It was extremely difficult to slice the tissue; thus I did not observe the gill trama structure nor did I find cheilocystidia (Smith did not see cheilocystidia).

Singer (Lilloa 13:65) says this is the same as C. cuneiformis Pat., which has priority.

CREPIDOTUS AQUOSUS Murr.

Mycologia 5:30. 1913

Pileus 1-2.5 cm broad, sessile, watery-brown, resupinate, reniform, expanded at maturity, glabrous or subglabrous, margin deeply sulcate. Context thin, soft, and watery.

Lamellae subcrowded, rather broad, dark-ochraceous or subfulvous.

Spores 4.5-7  $\mu$  in diameter, globose, faintly punctate, brown in 2% KOH. Pleurocystidia none; cheilocystidia none. Pileus trama interwoven. Cuticle of repent hyphae with a few more or less erect, scattered, short, colorless hyphae. Clamp connections present on the epicuticular hyphae and on the tomentum at the base of the pileus.

Habit, Habitat, and Distribution - On log, Jamaica, October.

Material Studied - JAMAICA: Earle, type from Rose Hill, Oct. 30, 1902.

Observations - This differs from cuneiformis in the organization of the cuticle, in its lack of cheilocystidia, and in its deeply sulcate margin. The basidia were unsuitable for study.

*aureifolius*  
CREPIDOTUS No. 24912

Pileus whitish, densely covered by brownish fibrils, incurved.

Lamellae radiating, yellowish *at first, then brownish*,

Stipe none; pileus attached by a tubercle.

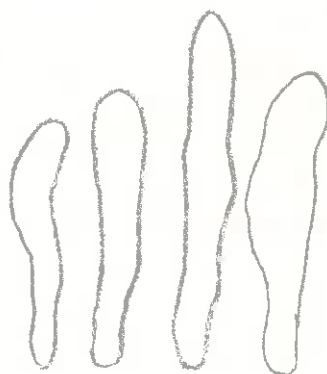
Spores 5-6 (7)  $\mu$ , globose, minutely punctate. Basidia 27-31 x 5-7  $\mu$ , 4-spored. Pleurocystidia ventricose, apices more or less tapering, 35-43 x 6-9  $\mu$ ; cheilocystidia 33-46 x 5-8  $\mu$ , cylindric to clavate, at times more or less ventricose. Hyphae of the fibrillose scales brown and incrustated.



Crepidatus ~~falsifibulatus~~ Moor.  
aurifolius  
No. 24912



Pl. - x 1000



Ch. - x 1000

CREPIDOTUS AUREIFOLIUS sp. nov.

On log of deciduous tree, Cades Cove, July 22, 1963.

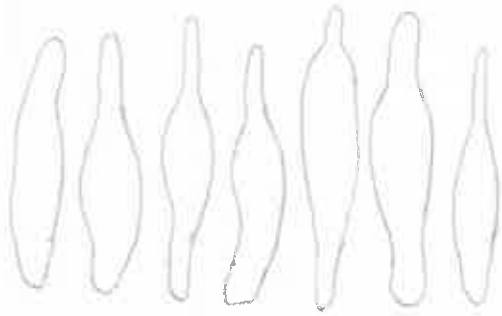
(No. 25732)

Pileus white to pale yellowish, dry, with scattered brownish, fibrillose, tuft-like scales, margin short-striate.

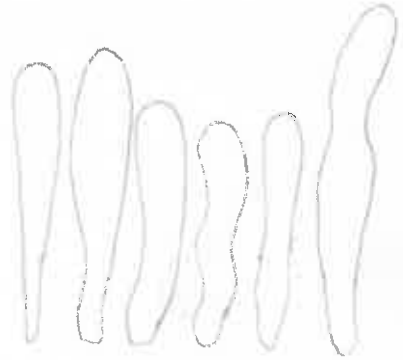
Lamellae close, medium broad, yellowish to orange-yellowish.

Spores 5.5-6.5  $\mu$ , globose, punctate. Basidia 27-33 x 7-8  $\mu$ , 2-4-spored. Pleurocystidia 32-40 x 6-8  $\mu$ , clavate or ventricose, appendiculate. Cheilocystidia 30-46 x 5-8  $\mu$ , clavate or cylindric or subventricose. Gill trama subparallel, hyphae 5-8  $\mu$  broad. Pileus trama interwoven. Cuticle of repent hyphae, bearing clusters of brown, incrusting hyphae, 6-15  $\mu$  broad. Clamp connections present.

Gepidotus H-25732  
aureifolius



Pl - x 1000



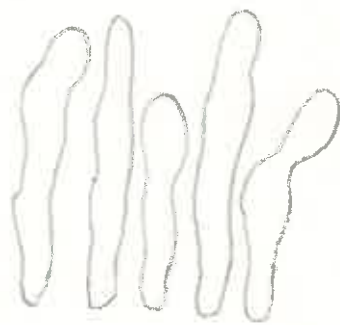
Ch - x 1000

*Crepidatus* near *aureifolius*

No. 26245



Pl.  $\times 1000$



Ch.  $\times 1000$

CREPIDOTUS BETULAE Murr.

Type

(On fallen twigs of Betula lenta in N. Y. Bot. Garden, June 16, 1902, by E. S. Earle, No. 241.)

Spores (5.5)6.6-8.5 x 4-5  $\mu$ , ellipsoid, smooth. Basidia 18-26 x 5-7  $\mu$ , 2-4-spored. Pleurocystidia none; cheilocystidia 33-65 x 4-10  $\mu$ , cylindric, clavate, flask-shaped, to ventricose. Gill trama subparallel, often with a brownish mediostrate, hyphae 5-7  $\mu$  broad. Pileus trama interwoven. Cuticle an ixocutis, a zone, 100-160  $\mu$  thick, of loosely interwoven, slender, gelatinous hyphae, bearing scattered, slender, colorless hyphae, the innermost zone a distinct hypodermium. Clamp connections on the epicuticular hyphae and on the tomentum at the base of the pileus.

Although Murrill (N. A. Flora 10:151) says the pileus is dry, sections in KOH show a distinct gelatinous zone.

GREPIDOTUS BETULAE Hurr.

North Amer. Flora 10:151. 1917

Pileus (2)10-24 mm broad, sessile, pure white, suborbicular or reniform, dimidiate, villose with felted hairs, glabrous toward the margin with age, margin entire. Context rather thick, fleshy.

Lamellae rounded behind, pure white, at length colored by the spores, crowded, medium broad to broad, plane, edges at times gelatinous.

Spores 6-8.5 x 4-5  $\mu$ , ellipsoid, slightly inequilateral in profile, smooth. Basidia 20-27 x 5-7  $\mu$ , 2-4-spored. Pleurocystidia none; cheilocystidia 33-65(125) x 4-10  $\mu$ , cylindric, clavate, flask-shaped, to ventricose, often tramal in origin. Gill trama subparallel, often with a brownish mediostrate and a gelatinous subhymenium, hyphae 3-7  $\mu$  broad. Pileus trama interwoven. Cuticle a gelatinous zone, 100-160  $\mu$  thick, of loosely interwoven, slender hyphae, bearing scattered, slender, colorless, erect hyphae, the innermost zone a distinct hypodermium. Clamp connections on the epicuticular hyphae and on the tomentum at the base of the pileus.

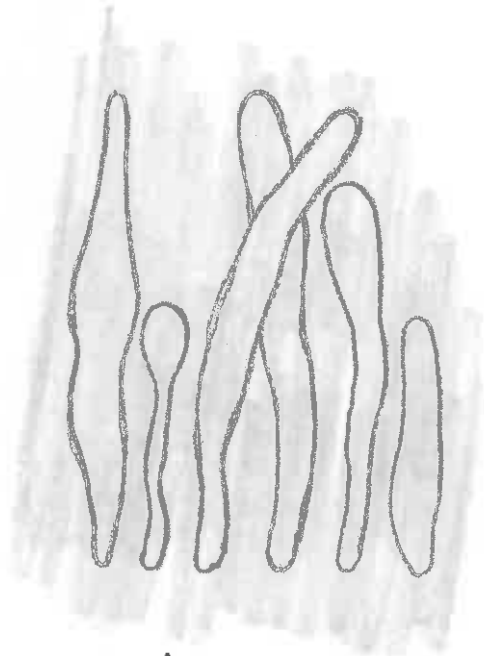
Habit, Habitat, and Distribution - On dead wood of birch, alder, beech, and other deciduous trees, New York, Virginia, Tennessee, and Michigan, June-July.

Materials Studied - MICHIGAN: Smith 66940; NEW YORK: Earle 241, the type, from N. Y. Botanical Garden, New York City, June 16, 1902; TENNESSEE: Hesler 7874.

Observations - Although Murrill (1917) says the pileus is dry, there is a distinct gelatinous, cuticular zone.

*Grepidotus betulae* Murr.

Type



Ch - x 1000

7874

CREPIDOTUS BETULAE Murr.

Pileus 2-14 mm. broad, resupinate then reflexed, white, attached laterally or dorsally, orbicular to conchate, tomentose. Context medium thin; odor and taste not recorded.

Lamellae radiating from a lateral point, <sup>closest</sup> subdistant, medium broad, white then pinkish, edges fimbriate.

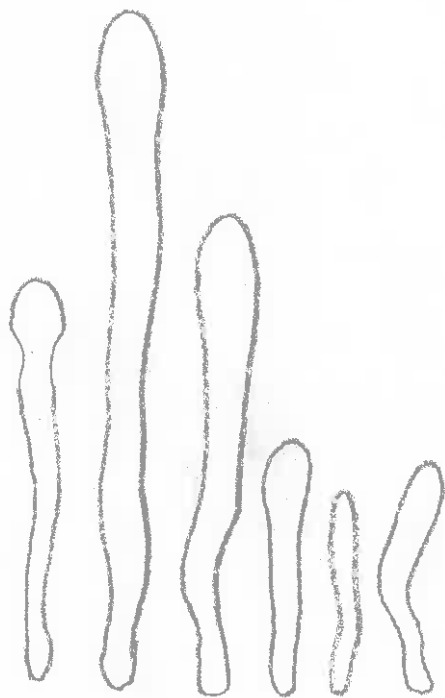
Stipe none, or <sup>temporary +</sup> very short and then eccentric.

Spores 6-8 (9) x 3.8-4.5  $\mu$ , ellipsoid, slightly inequilateral in side view, smooth, medium pale brown in 2% KOH. Basidia 21-30 x 5-6  $\mu$ , 2-4-spored. Pleurocystidia none; cheilocystidia 27-88 x 3-8  $\mu$ , clavate to cylindric-clavate. Gill trama subparallel, hyphae 3-5  $\mu$  broad. Pileus trama interwoven. Cuticle a gelatinous zone, 160-200  $\mu$  thick, hyphae narrow and loosely interwoven, the zone bearing a trichodermium of long, slender, colorless hyphae. Hypodermium distinct. Clamp connections present on the trichodermial hyphae.

This agrees very well with the type.



*betulae* Murr.  
*Crepidatus*, No. 7874



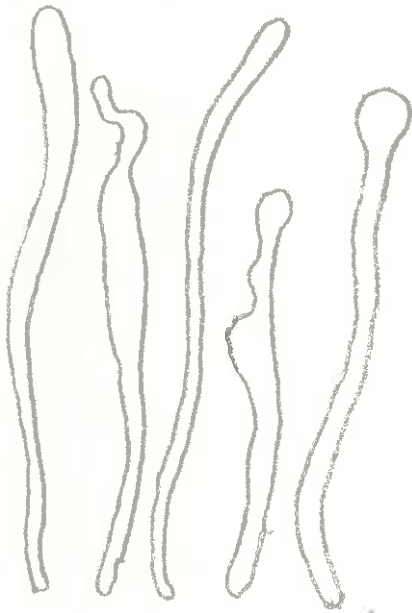
Ch - x 1000

*betulae*  
CREPIDOTUS H-20785

Spores 6-8 x 4-4.5  $\mu$ , ellipsoid, inequilateral, smooth. Pleurocystidia none; cheilocystidia tramal: 54-78 x 3-8  $\mu$ , more or less filamentous, at times capitate, gelatinous; no hymenial cheilocystidia found. Gill trama subparallel, hyphae 5-10  $\mu$  broad. Pileus trama interwoven, branched. Cuticle a gelatinous zone, 140-250  $\mu$  thick, the surface with scattered, long, colorless hyphae, 2-3  $\mu$  broad. Clamp connections present.

This is suggestive of haerens, but has clamps *hyphae on the pileus.* and *colorless*  
Cf. Sm-20398.

Crepidotus H-20785  
betulae



Ch (tramal) - x 1000

Versati

CREPIDOTUS BICOLOR Murr.

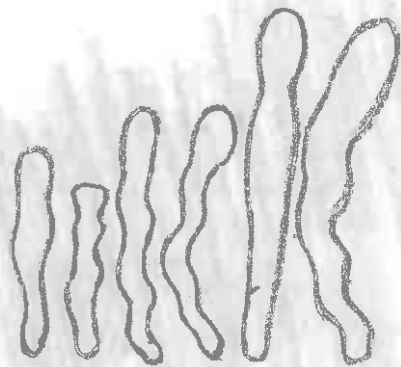
Type

(Collected by Morton E. Peck, British Honduras, 1906)

Spores 7-8 x 5-6  $\mu$ , broadly ellipsoid, smooth, conspicuously thick (double) walled, reddish-brown to rusty-brown under ~~the~~ <sup>microscope</sup> (in 2% KOH). Basidia 19-30 x 5-7  $\mu$ , 2-4-spored, mostly 4-spored. Pleurocystidia none; cheilocystidia 23-46 x 3.5-6  $\mu$ , clustered, cylindric to slender-clavate, often irregular to slightly constricted. Gill trama undulating subparallel, hyphae 3-6  $\mu$  broad. Pileus trama interwoven. Cuticle a cutis, the surface hyphae forming a narrow, conspicuous zone which is rusty-brown. Clamp connections none.

*Crepidatus bicolor* Murr.

Type



Ch - x 1000

29529  
~~25929~~

CREPIDOTUS *brunneus* sp. nov.

On Hardwood log, McLean Co., Illinois Leg. W. B. Cooke, (No. 35272),  
Aug. 13, 1965.

Notes by Cooke

Pileus 2-2.5 cm broad, brown, powdery, strongly imbricate.

Notes by Hesler

Lamellae medium broad, close or subclose.

Stipe none.

Spores (5.5)6-8.5(9) x 4.5-5.5  $\mu$ , ellipsoid, smooth, germ pore none. Pleurocystidia none; cheilocystidia 30-38 x 7-11  $\mu$ , flask shaped, neck more or less long, at times subcapitate, or forked, sometimes tramal, gelatinous. Gill trama and pileus trama similar: of irregularly shaped and branched hyphae. Cuticle of repent hyphae. Clamp connections none.

*Crepidotus brunneus* sp. nov.

Pileus 6-12 mm broad, sessile, often imbricate, slightly viscid, near "buffy brown", tinged olivaceous, short-tomentose, margin plicate-striate. Lamellae radiating from a tubercle, pallid brown then dark brown, close, broad, edges (margins) gelatinous. Spores 6-8.5 x 4.5-5.5  $\mu$ , ellipsoid, smooth. Basidia 24-28 x 6-7  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 27-50 x 6-12  $\mu$ , flask-shaped with a slender neck, rarely forked. Pileus cuticle an ixocutis. Clamp connections none. Specimen typicum in Herb. Univ. Tenn., lectum W.B. Cooke, McLean County, Illinois, August 13, 1965, No. 29529 (TENN).

Pileus 6-12 mm latus, sessilis, saepe imbricatus, leviter viscidus, paene "buffy brown", colore olivaceo tinctus, breviter tomentosus, margine plicato-striatus. Lamellae ex tuberculo<sup>se</sup> radiantes, pallido-brunneae, deinde fusco-brunneae, confertae, latae, marginibus gelatinosae. Sporae 6-8.5 x 4.5-5.5  $\mu$ , ellipsoideae, leviter. Basidia 24-28 x 6-7  $\mu$ , tetra-sporae. Pleurocystidia desunt; cheilocystidia 27-50 x 6-12  $\mu$ , gracili ampullacea, ~~gracili ac montana~~, per raro-furcata. Pilei cuticula ixocutis. Filulae desunt. Specimen typicum in Herb. Univ. Tenn., lectum W.B. Cooke, McLean County, Illinois, August 13, 1965, No. 29529 (TENN).

*Gepidotus brunneus* sp. nov.

29529

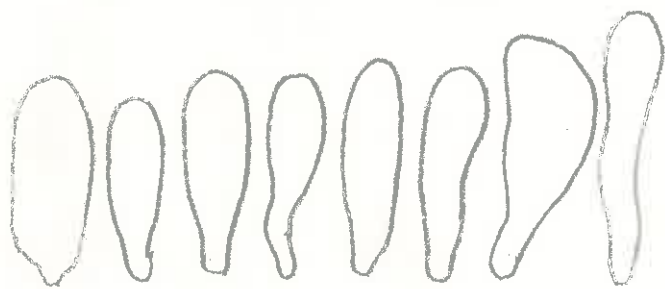


ch  $\times 1000$

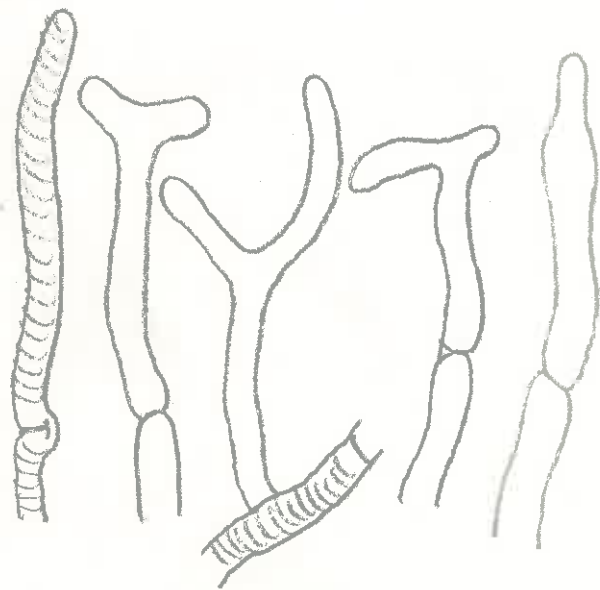


H-26080

*Crepidotus calolepis*  
*Kaufmannii*



Ch - x 1000



Cuticular brownish microcrystalline

Hyphae - x 1000

*Repetitum*

CREPIDOTUS GESATII (Rab.) Sacc.

(H-26098)

Leg. & det. W. T. Reijnders, Holland, on Salix, Oct. 31, 1954.

(Same as Sm-66267, sphaerosporus, from Jossierand)

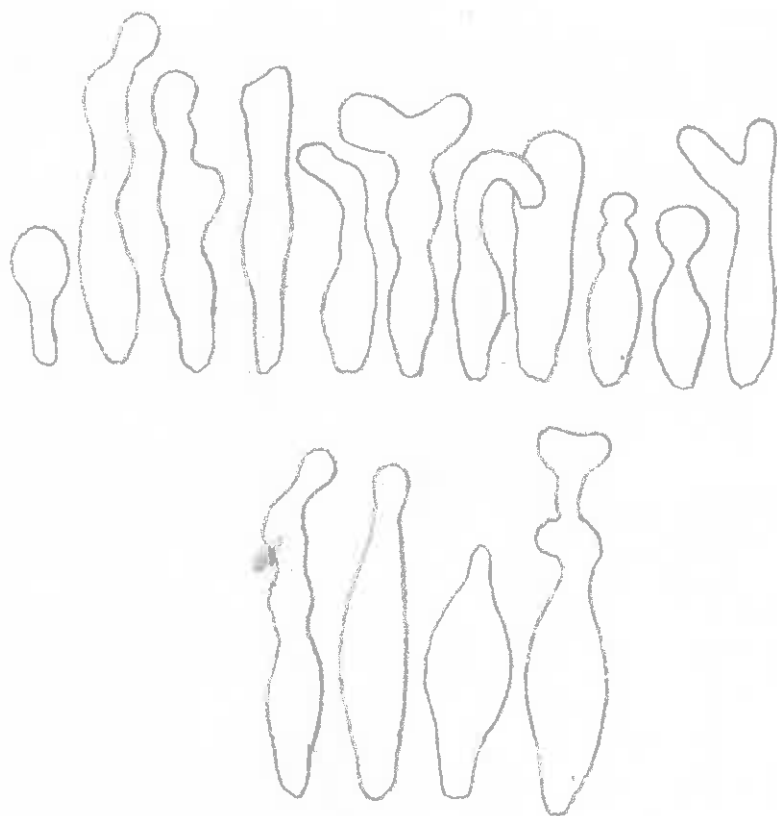
Pileus (7) 11-17 x 8-13 mm, white, densely felted, tomentose, rather convex, without stem.

Lamellae rather distant, 5-6 with 3-12 small gills between each pair, up to 2 mm wide, pallid at first, then buff; edge entire.

Spores 7-9(10) x 5.5-7(7.5)  $\mu$ , broadly ellipsoid to subglobose or subovoid, some more or less flat-sided, punctate to echinulate, brownish. Basidia 18-24 x 4-5  $\mu$ . Pleurocystidia none; cheilocystidia 18-50 x 6-12  $\mu$ , versiform: clavate, cylindric, ventricose, at times with a neck (smooth or constricted), sometimes capitate, or forked or crooked. Gill trama interwoven, hyphae 4-6(8)  $\mu$  broad. Pileus trama interwoven. Cuticle of repent hyphae, bearing scattered to gregarious, colorless, straight hyphae, 2.5-5  $\mu$  broad. Clamp connections present.

This is related to submollis which has slightly different spores, longer in relation to breadth, and shorter, less conspicuous ornamentations, narrower and less contorted cheilocystidia, close gills. It is very close to Sm-49808 (submollis), and seems almost identical with Sm-50880, except that cesatii has broadly ellipsoid spores with rounded ends, whereas submollis are slightly more slender and less conspicuously punctate. In <sup>sub-</sup>mollis, the pileus-turf is more fully developed than in cesatii.

*Gepidotus cesatii* (Rab.) Sacc.  
(H-26098) (from Bas, Holland)



Ch - x 1000

CREPIDOTUS CESATII (Rab.) Sacc.

Pilat No. 487965, leg. and det. Pilat, Czechoslovakia,  
in mixed Abies alba, Picea excelsa, Fagus silvatica,  
on P. excelsa, Aug. 1937.

x 5-7 $\mu$ ,

Spores (6)7-8.5 $\mu$  broadly ellipsoid, punctate-  
echinulate. Basidia 25-32 x 6-8  $\mu$ , 4-spored. Pleurocystidia  
none; cheilocystidia 28-43 x 6-7  $\mu$ , cylindric to clavate  
or subventricose, apices knobbed or irregularly branched.  
Gill trama subparallel, hyphae 6-12  $\mu$  broad. Pileus trama  
interwoven. Cuticle variable: at times distinct and repent,  
or not sharply differentiated, the surface bearing a turf  
of colorless, more or less erect hyphae, 3-4.5 (6)  $\mu$  broad.  
Clamp connections present.

CREPIDOTUS CESATII (Rab.) Sacc.

Pilat No. 487965, leg. and det. Pilat, Czechoslovakia,  
in mixed Abies alba, Picea excelsa, Fagus silvatica,  
on P. excelsa, Aug. 1937.

Spores (6) 7-8.5  $\mu$ , broadly ellipsoid, punctate-  
echinulate. Basidia 25-32 x 6-8  $\mu$ , 4-spored. Pleurocystidia  
none; cheilocystidia 28-43 x 6-7  $\mu$ , cylindric to clavate  
or subventricose, apices knobbed or irregularly branched.  
Gill trama subparallel, hyphae 6-12  $\mu$  broad. Pileus trama  
interwoven. Cuticle variable: at times distinct and repent,  
or not sharply differentiated, the surface bearing a turf  
of colorless, more or less erect hyphae, 3-4.5 (6)  $\mu$  broad.  
Clamp connections present.

Agaricus (Crepidotus) cacaophyllus B. & C.

Jour. Finn. Soc. 10: 291. 1868

Photo of original description:

73\*. A. (CREPIDOTUS) CACAOPHYLLUS, B. & C. (807.) Pileo excentrico subreniformi luteolo squamoso, marginem versus tomentoso; stipite brevi; lamellis adnexis, postice attenuatis fuscis distantibus.  
On dead wood. Pileus  $\frac{1}{2}$  inch across; stem 2 lines high, 1 line thick. Gills chocolate-brown. Spores ochraceous.

See:

Crepidotus cacaophyllus (B. & C.) Aacc., Syll.  
Fung. 5: 883. 1887.

CREPIDOTUS CACAOPHYLLUS (B. & C.) Sacc.

Syll. Fung. 5:883. 1887

Agaricus cacaophyllus B. & C., Jour. Linn. Soc. 10:291. 1868.

Singer (Lilloa 13:83. 1947) says he has published on a portion of the type collection (in Lloydia 9:130-131. 1946) preserved at the Curtis Herbarium. He thinks it is not at all a Crepidotus, but probably an inhibited form of Gymnopilus. We have not seen the type.

CREPIDOTUS CACAOPHYLLUS (B.& C.) Sacc.

Syll. Fung. 5:883. 1887

Agaricus cacaophyllus B. & C., Jour. Linn. Soc. 10:291. 1868.

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CREPIDOTUS ~~CES~~ATII (Rab.) Sacc.

Pilat No. 234<sup>5</sup>7, det. Pilat, Sobeslav-Blata,  
Czechoslovakia, June, 1932.

Spores 6.5-9.5  $\times$  5.5-7.5  $\mu$ . Otherwise as in No.487965.

CREPIDOTUS CESATII Rab. var. GOTHOBURGENSIS Pilat

Monogr. europ. du genre Crepidotus, p.63. 1948.

TYPE VARIETY

On live trunks of cultivated Lonicera tatarica,  
Västergötland: Göteborg, Aug. 1937.

Spores 6.5-9 x 5-7  $\mu$ , broadly ellipsoid, pale brown, closely resembling those of the species, punctate-echinulate. Basidia 23-29 x 6-8  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 26-42 x 5-7  $\mu$ , slender, cylindric or clavate, at times more or less constricted, rarely and slightly forked and knobbed. Gill trama undulating subparallel, hyphae 4-6  $\mu$  broad. Pileus trama interwoven. Cuticle of repent hyphae, bearing a turf of colorless hyphae, 3-5  $\mu$  broad. Clamp connections present.

CREPIDOTUS CESATII Rab. var. GOTHOBURGENSIS Pilat

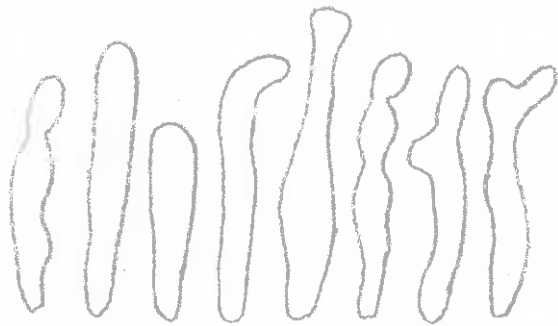
Monogr. europ. du genre Crepidotus, p.63. 1948.

TYPE VARIETY

On live trunks of cultivated Lonicera tatarica,  
Västergötland: Göteborg, Aug. 1937.

Spores 6.5-9 x 5-7  $\mu$ , broadly ellipsoid, pale brown, closely resembling those of the species, punctate-echinulate. Basidia 23-29 x 6-8  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 26-42 x 5-7  $\mu$ , slender, cylindric or clavate, at times more or less constricted, rarely and slightly forked and knobbed. Gill trama undulating subparallel, hyphae 4-6  $\mu$  broad. Pileus trama interwoven. Cuticle of repent hyphae, bearing a turf of colorless hyphae, 3-5  $\mu$  broad. Clamp connections present.

*Orepidotus cesatii* var. *gothoburgensis* Pilat  
Type



Ch - x 1000

CREPIDOTUS CESATII Rab.

Pilat No. 488570, det. Pilat, Czechoslovakia, Carpathorossia, Aug. 1937.

Spores 6.5-8.5 x 5-6  $\mu$ ; basidia 24-30 x 5.5-7  $\mu$ ,  
2-4-spored. Otherwise as in No. 487965.

CREPIDOTUS CESATII Rab.

Pilat No. 488570, det. Pilat, Czechoslovakia, Carpa-  
torossia, Aug. 1937.

Spores 6.5-8.5 x 5-6  $\mu$ ; basidia 24-30 x 5.5-7  $\mu$ ,  
2-4-spored. Otherwise as in No. 487965.

CREPIDOTUS CESATII (Rab.) Sacc.

Pilat No. 23173, det. Pilat, Czechoslovakia, Aug. 1935,  
on Picea and Abies (labelled C. sphaerosporus Pat.;  
filed as C. cesatii)

Spores 7-9.5 x 5-7  $\mu$ ; otherwise as in No. 487965.

CREPIDOTUS CESATII (Rab.) Sacc.

Pilat No. 23456, det. Pilat (as C. carpaticus Pilat, but filed as C. cesatii), on Fagus silvatica among moss, Carpatorossia, July 1932.

Spores 8.5-10 x 5,5-7  $\mu$ ; otherwise as in No. 487965.



CREPIDOTUS CESATII (Rab.) Sacc.

Pilat No. 23173, det. Pilat, Czechoslovakia, Aug. 1935,  
on Picea and Abies (labelled C. sphaerosporus Pat.;  
filed as C. cesatii)

Spores 7-9.5 x 5-7  $\mu$ ; otherwise as in No. 487965.

CREPIDOTUS CESATII (Rab.) Sacc.

Pilat No. 23456, det. Pilat (as C. carpaticus Pilat, but filed as C. cesatii) , on Fagus silvatica among moss, Carpatorossia, July 1932.

Spores 8.5-10 x 5,5-7  $\mu$ ; otherwise as in No. 487965.

CREPIDOTUS CESHATII (Rab.) Sacc.

Pilat No. 23457, det. Pilat, Sobeslav-Blata,  
Czechoslovakia, June, 1932.

Spores 6.5-9.5 x 5.5-7.5  $\mu$ . Otherwise as in No. 487965.

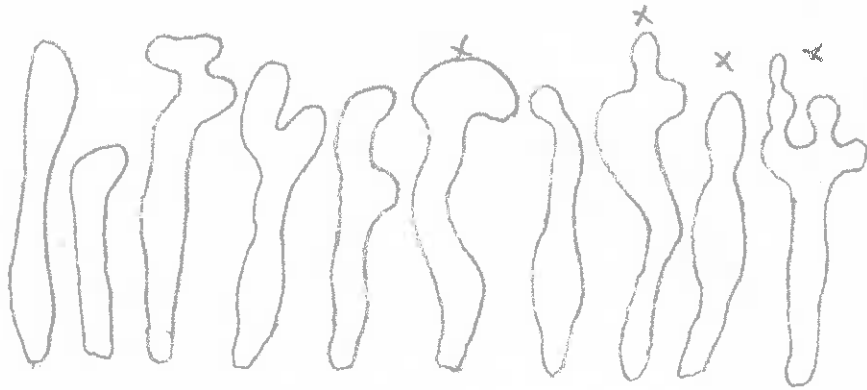
CREPIDOTUS CESATII (Rab.) Sacc.

Pilat No. 487852, det. Pilat, Czechoslovakia, Aug.1937.

Spores 6.5-8.5 x 5.5-7  $\mu$ . Otherwise as in No. 487965.

*Pezizotus cesatii* (Rab.) Sacc.

Pilab No. 487965



Sh - x 1000

CREPIDOTUS CESATII (Rab.) Sacc.

Pilat No. 487852, det. Pilat, Czechoslovakia, Aug.1937.

Spores 6.5-8.5 x 5.5-7  $\mu$ . Otherwise as in No. 487965.

CREPIDOTUS CESATII (Rab.) Sacc.

Pilat No. 149096, det. Vacek, Moravia, Dec. 24, 1946  
(det. as Dochmiopus sphaerosporus Pat. sensu Konr. and  
Maubl.).

Spores 8-10 x 4.5-6  $\mu$ ; otherwise as in No. 487965.

CREPIDOTUS CESATII (Rab.) Sacc.

Pilat No. 149096, det. Vacek, Moravia, Dec. 24, 1946  
(det. as Dochmiopus sphaerosporus Pat. sensu Konr. and  
Maubl.).

Spores 8-10 x 4.5-6  $\mu$ ; otherwise as in No. 487965.



CREPIDOTUS CINNABARINUS Pk.

Torrey Bot. Club Bull. 22:489. 1895.

Pileus 5-15 mm broad, sessile or subsessile, scarlet to cinnabar-red, minutely tomentose or pulverulent, glabrescent, resupinate or reflexed, margin even. Context thin,

Lamellae sinuate, reddish-flacculent on the fimbriate edges, brownish when dried, medium broad, subdistant.

Stipe none, or short (1-2 mm), lateral, reddish-tomentose.

Spores 7-9 (10) x 5-6  $\mu$ , ellipsoid to ovoid, more rarely subglobose, punctate, yellowish-brown (under the microscope). Basidia 25-32 x 7-8  $\mu$ , 2-4-spored. Pleurocystidia none; cheilocystidia 34-63 x 5-10  $\mu$ , clustered, fusoid, bottle-shaped, clavate, or cylindric, at times extending up the sides to a distance of 100  $\mu$ . Gill trama subparallel. Cuticle bearing long (150-350  $\mu$ ) hyphae, forming a turf.

Habit, Habitat, and Distribution - On bass-wood and poplar, Michigan, Ohio, and Alabama; also Denmark (Møller 1946).

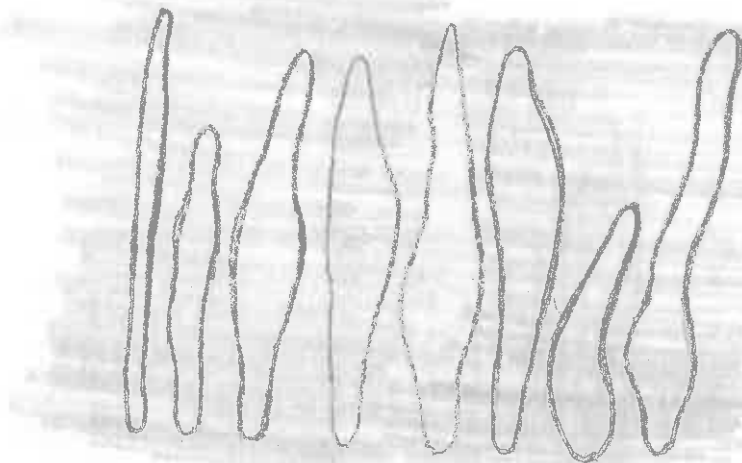
Material Studied - MICHIGAN: Peck's type, from Ann Arbor, Sept. 24, 1894, leg. L. N. Johnson.

Observations - Singer (Lilloa 13:68) says the spores sometimes have a suprahilar depression but usually with a distinct suprahilar applanation. Its bright red color is distinctive. The type material is sparse.

The description of microscopic characters above is based on a study of the type.

*Crepidulus cinnabarinus* PK.

Type



Ch - x 1000

CREPIDOTUS CINNABARINUS Pk.

(Mich. Herb.-1847)

Labelled "Co-Type." On logs, Ann Arbor, Mich., leg. L. N.  
Johnson, Sept. 24, 1894.

In agreement with the Type.

Singer says = uber

CREPIDOTUS CITRI Pat.

Bull. Soc. Myc. Fr. 18:172. 1902.

Pileus 2-5 mm. broad, resupinate to subsessile, orbicular, convex, indented-reniform behind, russet-white, smooth, glabrous, neither striate nor incised. Context thin, soft.

Lamellae radiating from an eccentric point, ochraceous, broad or medium-broad, distant to subdistant.

Stipe inconspicuous, eccentric, white, inserted at the center of a delicate, white, mycelial tuft.

Spores 6-7 (8) x 5-5.5 (6)  $\mu$ , mostly ovoid, or more or less ellipsoid, thick (double)-walled, brown, smooth. Basidia 15-23 x 6-7 (9)  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia none found. Gill trama subparallel, hyphae 3-6  $\mu$  broad. Pileus trama and cuticle structure not determined. Clamp connections none on cuticular hyphae <sup>nor</sup> ~~and~~ on the tomentum at the pileus-base.

Habit, habitat, and distribution. - Scattered on dying bark of Citrus, Guadeloupe and Martinique.

Material studied. - GUADELOUPE: Patouillard, the type, No. 49 (387), Camp Jacob.

Observations. - Singer (1947) concludes that this is a synonym of C. uber. *Material of the type was inadequate for study of the cuticle + pileus trama.*  
Murrill (1917:154) says the gills are narrow, but in the type they are broad or medium broad.

The description of microscopic characters above is based on a study of the type.

CREPIDOTUS CITRI Pat.

(Type, from Patouillard Herb., from Farlow Herbarium, collected on citrus bark, at Camp Jacob, Guadeloupe. Numbers 49 and 387 are on the packet.)

Spores 6-7 (8) x 5-5.5 (6)  $\mu$ , mostly ovoid, or more or less ellipsoid, thick (double)-walled, brown, smooth. Basidia 15-23 x 6-7 (9)  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia none found. Gill trama subparallel, hyphae 3-6  $\mu$  broad. Pileus trama and cuticle structure not determined. Clamp connections none on cuticular hyphae ~~and~~<sup>nor</sup> on the tomentum at the pileus-base.

The Patouillard collection consists of some 10 or 12 carpophores which appear flattened by pressure. The pileus is dorsally attached, the gills broad and subdistant to distant. Sections of the pileus were unsatisfactory for a study of the pileus trama and cuticle.

Singer (1947) says that the data he gathered through examination of the type seem to make it a synonym of C. uber.

Pilat (1950: 219) says the spores of the type at Paris are 7.5-8.5 x 5.5-6.8  $\mu$ , globose to globose-ovoid, smooth, obscurely ferruginous. Singer (1947) gives the spores 7-8.2 x 5.5-6.8  $\mu$ , & the hyphae without clamp connections; and thinks it a synonym of C. uber.

CREPIDOTUS CROCEITINCTUS Pk.

New York State Mus. Ann. Rept. 39:72. 188<sup>6</sup>

Pileus 1-2.5 cm. broad, convex or nearly plane, yellowish, ("light ochraceous-buff," the dorsal part often "ochraceous tawny," according to Singer, 1947), glabrous, (velvety behind, according to Singer, 1947), base sometimes white-villose, moist, sessile.

Lamellae rounded behind, whitish, <sup>soon</sup> becoming dull saffron-yellow, then ferruginous, moderately broad, close.

Stipe none.

Spores 5.5-7 x 4.5-5  $\mu$ , ovoid, <sup>at times</sup> in end view <sup>up to</sup> 6-angled, <sup>prominently</sup> punctate, rusty brown under the microscope. Basidia 23-32 x 5-6  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 28-33 x 6-9  $\mu$ , clavate to cylindric-subcapitate. Gill trama subparallel. Pileus trama interwoven. Cuticle more or less a cutis, but with scattered more or less erect short hyphae (approaching a trichodermium at the base). Clamp connections on the hyphae at the point of attachment, and more rarely on the cuticular hyphae.

Habit, habitat, and distribution. - On deal wood of hardwoods, New York south to Florida (Singer, 1947).

Material studied. - NEW YORK: Peck, the type (see Observations, below).

Observations. - In his original description, Peck (1887) states that his material was collected in the Adirondack Mountains,



and at Day, Saratoga County. In his herbarium at Albany, there are two packets, marked as follows: (1) labelled "Type No. 1," from Adirondack Mts., no date; (2) labelled "Type No. 2," from Day, Saratoga County, July. The word "Type" is not in Peck's hand-writing. The two collections are identical. The description of microscopic characters above is from a study of "Type No. 1."

Singer (1947) reports that the spores have a very small suprahilar depression or a large suprahilar applanation.

This species is <sup>suggestive of</sup> ~~very~~ related to C. crocophyllus (Berk.) Sacc. which has globose spores, the gills more deeply reddish-orange, and the pileus fibrillose-scaly.

CREPIDOTUS CROCEITINCTUS Pk.

Type

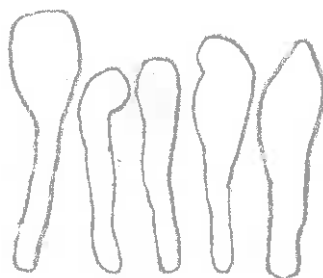
(Two packets were sent by Stanley J. Smith: (1) labelled Type No. 1, from Adirondack Mts., no date; (2) labelled Type No. 2, from Day, Saratoga Co., no date. In Peck's description: Rept. 39:72. 1877, he states: "Adirondack mountains and Day, Saratoga county. July." Microscopically, the two collections are identical. Notes below are based on Type No. 1.)

Spores 5.5-7 x 4.5-5  $\mu$ , ovoid, punctate, rusty brown under the microscope. Basidia 23-32 x 5-6  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 28-33 x 6-9  $\mu$ , clavate to cylindric-subcapitate. Gill trama subparallel. Pileus trama interwoven. Cuticle more or less a cutis, but with scattered more or less erect short hyphae (approaching a trichodermium at the base). Clamp connections on the hyphae at the point of attachment, and more rarely on the cuticular hyphae.

Singer (Lilloa 13:69) says the spores have a small suprahilar depression or a large suprahilar applanation, and that some of the spores, in end view, are 6-angled, the angles very strongly rounded. I could not make out the depression or the applanation, but did confirm the slight angles in end-view.

*Crepidotus croceotinctus* PK.

Type



Ch - x 1000

CREPIDOTUS CROCEITINCTUS

(H-9407)

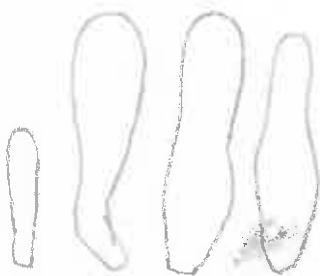
On deciduous wood, Montvale Springs, Aug. 30, 1936.

Pileus more or less resupinate to shelving, buff colored, villose, the fibrils at times pale brownish.

Lamellae medium broad, nearly close, buff or yellowish.

Spores 5.4-6.3 x 4-4.5 (4.8)  $\mu$ , ellipsoid or ovoid, punctate or more or less echinulate. Pleurocystidia none; cheilocystidia 18-36 x 4-10  $\mu$ , clavate to ventricose, at times subcapitate. Gill trama subparallel, hyphae 3-6  $\mu$  broad. Pileus trama densely interwoven. Cuticle not sharply differentiated, or of repent hyphae, bearing a turf of hyphae, 4-7  $\mu$  broad, many of which are colorless, others a dilute brown, either type may be incrusted; the terminal elements, at times, as clavate pilocystidia. Clamp connections present.

*Pseudotsuga* <sup>*croceitinctus*</sup> ~~*croceophyllus*~~ (P. K.) Sacc.  
(H-9407)



CREPIDOTUS CROCEITINCTUS Pk.

(H-14171)

Pileus 5-10 mm broad, resupinate and dorsally attached to shelving and laterally attached, pale-brownish, glabrous in front, villose behind, margin striate (dried material). Context thin.

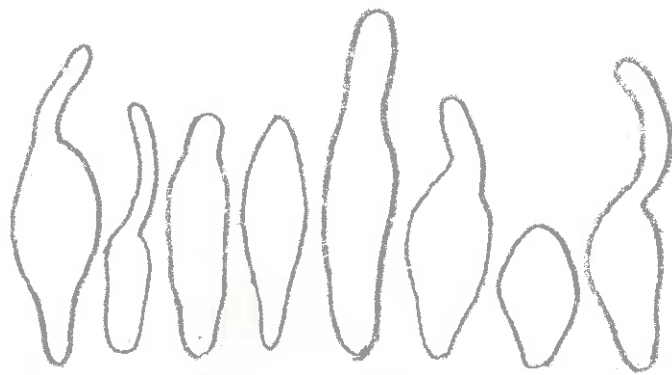
Lamellae radiating from an eccentric point, brown (young lamellae not seen, probably pallid or yellowish), broad or medium broad, medium-close or sub-distant, edges even.

Stipe none.

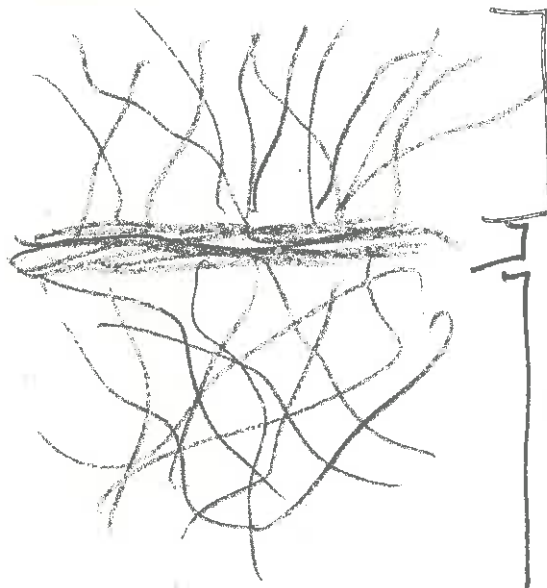
Spores 5-7 x 4.5-5.5  $\mu$ , ovoid, some subglobose or subovoid, conspicuously punctate, pale to medium brown (under microscope). Pleurocystidia none; cheilocystidia 18-41 (76) x 6-11  $\mu$ , clavate or clavate-vesiculose and appendiculate, or ventricose to bottle-shaped, more rarely short-vesiculose, inconspicuous. Gill trama subparallel to slightly interwoven. Pileus trama interwoven. Cuticle a narrow, more or less compact zone of brown, repent hyphae bearing a distinct trichodermium of erect, colorless hyphae. Epicuticular hyphae with clamp connections.

The spores are typical for croceitinctus.

*Crepidotus croceitinctus* PK.  
No. 14171



Ch - x 1000



Inchodermium  
(colorless)

Repet cuticular hyphae  
(brown)

Pileus trama

Agaricus (Crepidotus) crocophyllus, n. sp.  
London Jour. of Botany 6 : 313. 1847

Original Description

113. A. (*Crepidotus*) *crocophyllus*, n. sp.; pileo sessili subflabelliformi ochraceo-fusco adpresse squamoso; lamellis aurantiis.

On a dead trunk. Waynesville, Ohio. Sept. 5, 1844.  
T. G. Lea, Esq.

VOL. VI.

A A

p. 313

Pileus scarce  $\frac{1}{2}$  an inch long, flabelliform, convex, ochraceous-brown, clothed with minute adpressed scales. Stem none. Gills rather broad, rounded behind, bright buff. Spores subglobose, of a pale ochre-yellow.

I do not know any species with which this can be compared. *Agaricus croceo-lamellatus*, Let., is, I believe, the same with *Paxillus Panuoides*. The only resemblance, however, is in the colour of the gills. It is perhaps most like *Ag. mollis*, but besides the difference in the colour of the gills, the spores are smaller and of another form. It is not, I believe, resupinate in any stage of growth.



CREPIDOTUS CROCOPHYLLUS (Berk.) Sacc.

Syll. Fung. 5:886. 1887.

Agaricus (Crepidotus) crocophyllus Berk., London Jour. Bot.  
6:313. 1847.

Pileus scarcely 12 mm broad, sessile, not at first resupinate, convex, subflabelliform, ochraceous-brown, clothed with brownish minute, appressed fibrillose scales.

Lamellae rounded behind, rather broad, crowded, orange. (Bright buff in original description.)

Stipe none.

Spores 5.3-6 x 4.5-5.5  $\mu$ , globose or ovoid, slightly punctate, wall medium thick, many slightly flat-sided, pale brownish. Basidia 26-32 x 6-7  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 28-47 x 5-7  $\mu$ , clavate to subventricose. Gill trama subparallel, hyphae 4-7  $\mu$  broad. Pileus trama interwoven, at times more or less vesiculose. Cuticle of repent hyphae, bearing long (75-150  $\mu$  or more, 7-12  $\mu$  broad), brown, septate hyphae which form a trichodermium, a few incrustated. Clamp connections present on the brownish epicuticular hyphae and on the colorless hyphae of the pileus trama.

CREPIDOTUS CROCOPHYLLUS (Berk.) Sacc.

Type specimen, from Kew, collected at Waynesville, Ohio, T. G. Lea. Sept. 5, 1844.

Type

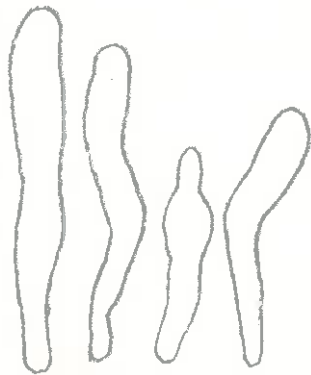
Spores 5.3-6 x 4.5-5.5  $\mu$ , globose or ovoid, slightly punctate, wall medium thick, many slightly flat-sided, pale brownish. Basidia 26-32 x 6-7  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 28-47 x 5-7  $\mu$ , clavate to subventricose. Gill trama subparallel, hyphae 4-7  $\mu$  broad. Pileus trama interwoven. Cuticle of repent hyphae, bearing long (75-150  $\mu$  or more, 7-12  $\mu$  broad), brown, septate hyphae which form a trichodermium, a few incrusted. Clamp connections present on the brownish epicuticular hyphae and on the colorless hyphae of the pileus trama.

Kauffman describes a depression or a cavity on one side; I found nothing of this kind in the type.

Pilat (1950:220) gives the spores of the type 5.8-6  $\mu$ , globose, subtly verrucose-punctate. He suggests that it is a small, juvenile form of C. applanatus (Pers. ex Fr.) Quel.

*Gepidotus crocophyllus* (Berk.) Ace.

Type



ch.  $\times 1000$

8077

GREPIDOTUS CROCOPHYLLUS (Berk.) Sacc.

Spores 5-6  $\mu$  broad, globose, punctate. Pleurocystidia none; cheilocystidia ventricose, 22-28 x 4-5  $\mu$ . Gill-trama subparallel. Tomentose-scales on pileus composed of brownish hyphae with clamps and spiral markings (incrustations).

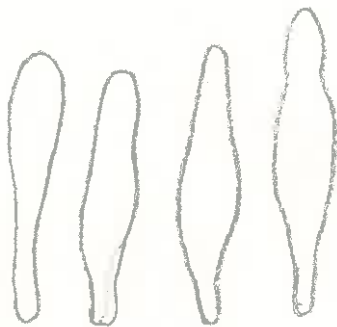
10795

CREPIDOTUS CROCOPHYLLUS (Berk.) Sacc.

Spores 5-6.5  $\mu$ , globose, rough. Pleurocystidia none; cheilocystidia clavate or ventricose, 30-38 x 5-7  $\mu$ . Gill-trama subparallel.

*Crepidotus crocophyllus* (Berk.) Nacc.

No. 10795



ch - x 1000

12539

CREPIDOTUS CROCOPHYLLUS (Berk.) Sacc.

(Smith called this dorsalis)

Pileus 1-2.5 cm. broad, sub-orbicular, yellowish-tawny, drying "ochraceous buff" to "pale yellow-orange," at times fading, with numerous fibrillose scales, margin even. Context thin.

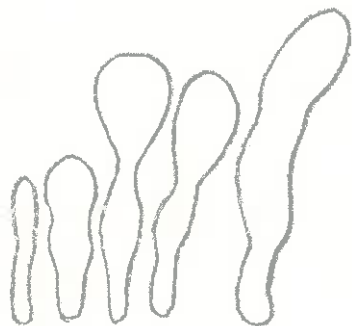
Lamellae radiating, close, broad, yellowish becoming ochraceous-fuscous, edges fimbriate.

Stipe none, laterally sessile.

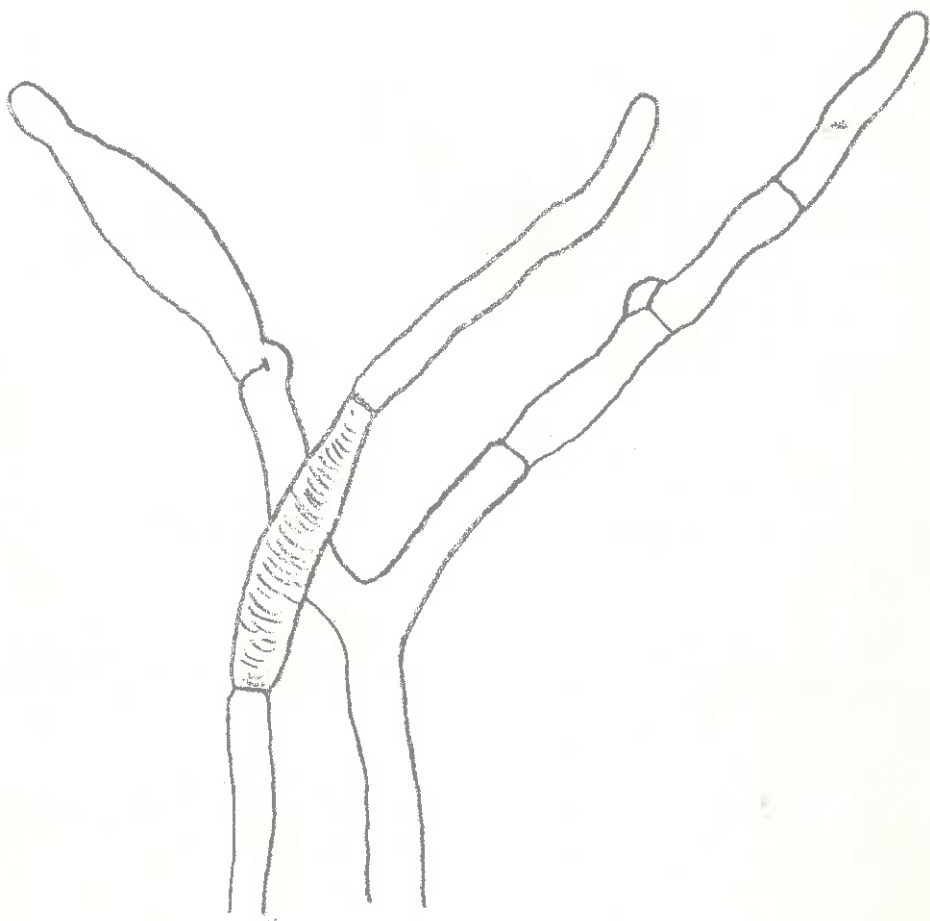
Spores 5-6  $\mu$ , globose, faintly rough. Pleurocystidia none; cheilocystidia conspicuous, more or less versiform: cylindric, clavate, at times sub-capitate, 35-52 x 5-6 (10)  $\mu$ . Gill-trama subparallel. Cuticle a trichodermium of brownish, septate, often branched hyphae, some elements of which are incrustated.

*Gravidotus crocophyllus* (Berk.) Sacc.

No. 12539



Ch - x 1000



Trichodermial hyphae - x 1000



22465

CREPIDOTUS CROCOPHYLLUS (Berk.) Sacc.

Spores 4.5-6 (7)  $\mu$ , globose or subovoid, faintly rough, "buckthorn brown" in mass. Pleurocystidia none; cheilocystidia clavate to irregular, 17-30 x 4-7  $\mu$ . Gill-trama interwoven. Cuticle a trichodermium as in 12539.

CREPIDOTUS CUNEIFORMIS Pat.

Bull. Soc. Myc. Fr. 18:173. 1902

Pileus 5-15 mm broad, sessile, reniform to flabelliform, base cuneate, pale brown, glabrous, dry, margin striatulate when wet. Context soft, watery; taste mild.

Lamellae radiating, broad, close, at first pallid, then brownish, edges serrulate.

Spores 5.4-7  $\mu$  in diameter, globose or subglobose, finely punctate, brown in 2% KOH. Basidia 20-24 x 7-8  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 28-40 x 7-13  $\mu$ , clavate, few, collapsed against the edges, inconspicuous. Gill trama subparallel, hyphae 5-7  $\mu$  broad. Pileus trama interwoven. Cuticle composed of a zone of three to five layers of repent hyphae, 5-7  $\mu$  broad, with occasional erect colorless hyphae.

Habit, Habitat, and Distribution - On hardwood logs, Guadeloupe, Michigan, and Texas, June-July.

Material Studied - GUADELOUPE: Patouillard, No.31 (405), type, deposited in the Herbarium at Harvard University; MICHIGAN: Smith 41548, 49609, 49625, 49641, 63673; TEXAS: Thiers 1885.

Observations - The description of microscopic characters above is based on a study of the type. The Michigan and Texas collections showed areas of erect hyphae which formed a turf, the terminal elements of which were pilocystidia. The multi-layered cuticle is characteristic, along with spore-size, and the shape of the cheilocystidia.

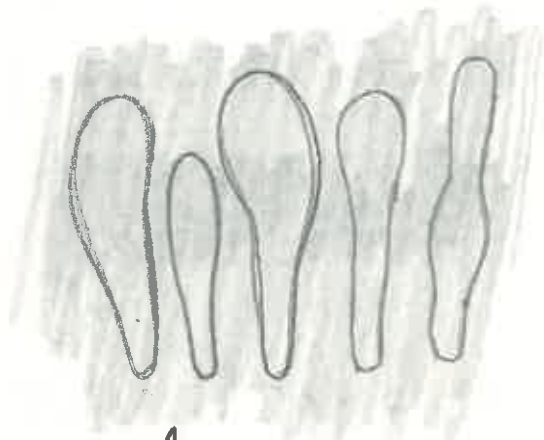
CREPIDOTUS CUNEIFORMIS Pat.

(Type, from Patouillard Herbarium at Farlow Herb., collected on dead wood, Guadeloupe. Numbers 31 and 405 on the packet.)

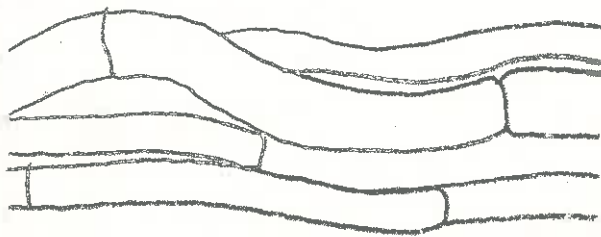
Spores 5.4-7  $\mu$ , globose or subglobose, finely punctate, brown <sup>in 2% KOH.</sup> Basidia 20-24 x 7-8  $\mu$ . Pleurocystidia none; cheilocystidia 28-40 x 7-13  $\mu$ , clavate <sup>or ventricose,</sup> few, collapsed against the edges, inconspicuous. Gill trama subparallel, hyphae 5-7  $\mu$  broad. Pileus trama interwoven. Cuticle a cutis, composed of a layer of three to five repent hyphae, 5-7  $\mu$  broad. Clamp connections few, inconspicuous on the cuticular hyphae.

Singer (1947) concludes that C. aquosus Murr. is the same.

*Crepidotus cuneiformis* Pat.  
Type



Ch - x 1000



Portion of Cutis - x 1000

CREPIDOTUS CYSTIDIOSUS sp. nov.

(H-4331)

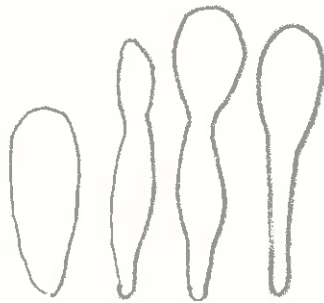
Pileus white, glabrous.

Lamellae close. broad.

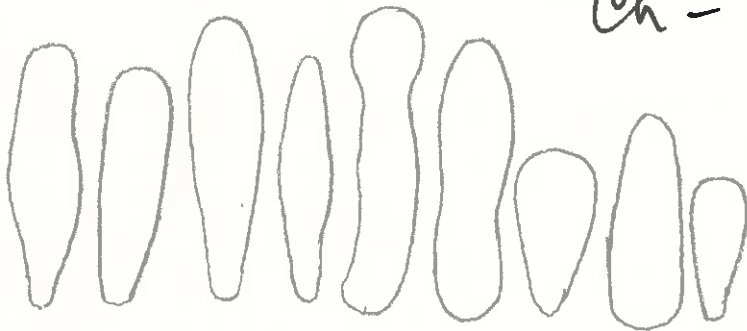
Spores 5-7.5  $\mu$ , globose, punctate. Basidia 26-32 x 5-6  $\mu$ , 4-spored. Pleurocystidia 20-40 x 7-11  $\mu$ , clavate, sunventricose, at times cylindric-capitate; cheilocystidia 24-36 x 5-10  $\mu$ , clavate, at times more or less constricted and capitate. Gill trama subparallel, hyphae 5-9  $\mu$  broad. Pileus trama interwoven, often vesiculose. Cuticle of several layers of repent dingy hyphae. Clamp connections present.

*Crepidulus* <sup>*capitulosus*</sup> ~~*capitulosus*~~ (B. & C.) ~~Paes.~~

No. 4331



Ch - x 1000



Pl - x 1000

CREPIDOTUS CYSTIDIOSUS sp. nov.

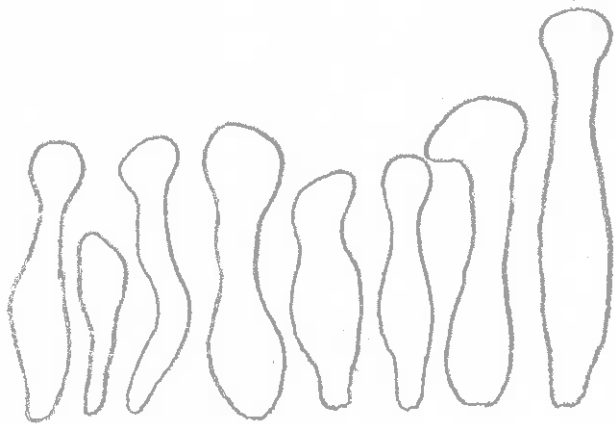
(H-5116)

Spores 5-7.5  $\mu$ , globose, faintly punctate. Pleurocystidia 28-35 x 8-10  $\mu$ , clavate, more or less capitate; cheilocystidia (24) 33-50 x 5-10 ( $\mu$ apex) x 7-11 (base)  $\mu$ , dumb-bell, ventricose, flask-shaped, usually more or less capitate, base usually broadened. Gill trama subparallel, hyphae broad, 6-12  $\mu$ . Cuticle repent, hyphae dingy to colorless; no erect hyphae. Clamps present.

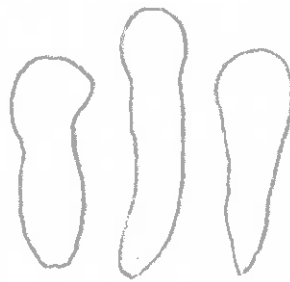
Same as H-4331.

<sup>aptychoceros</sup>  
*Grepidotus aphyodes* (B. & C.) Aacc.

No. 5116



Ch - x 1000



Pl - x 1000



CREPIDOTUS CYSTIDIOSUS sp. nov.

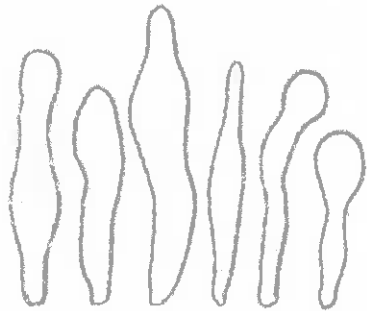
(H-18184)

Pileus white when fresh, glabrous.

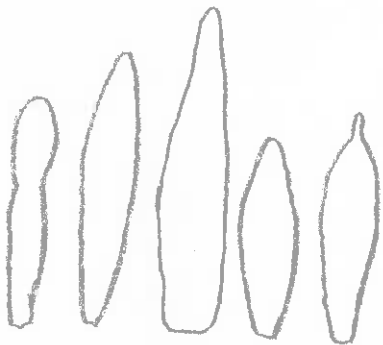
Spores 6-7.5  $\mu$  in diameter, globose or subglobose, slightly punctate. Pleurocystidia 27-43 x 5-9  $\mu$ , clavate, obclavate, fusoid; cheilocystidia 22-38 x 4-7  $\mu$ , ventricose, clavate, at times more or less capitate, or bottle-shaped with a neck. Gill trama subparallel, hyphae 5-10  $\mu$  broad. Cuticle of repent hyphae; no erect hyphae. Clamp connections on the cuticular hyphae.

*Crepidulus* <sup>cystidiosus sp. nov.</sup> ~~nephrodes (B+C) Ageo.~~

No. 18184 (from Douglas Lake, Mich.)



Ch - x 1000



Pl - x 1000

CREPIDOTUS CYSTIDIOSUS sp. nov.

(H-19157)

Pileus 1-2 cm broad, white, hygrophanous, margin even when dry, striatulate when wet. Context thin, white, soft, subgelatinous to feel; odor mild, taste soon becoming bitter and astringent.

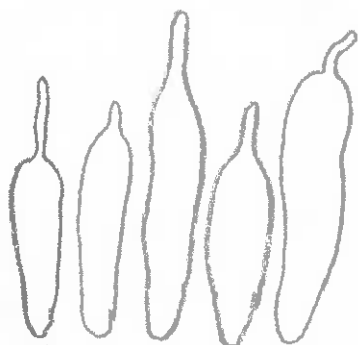
Lamellae narrowly adnate, broad, nearly close, white becoming pale cream, edges fimbriate.

Stipe none.

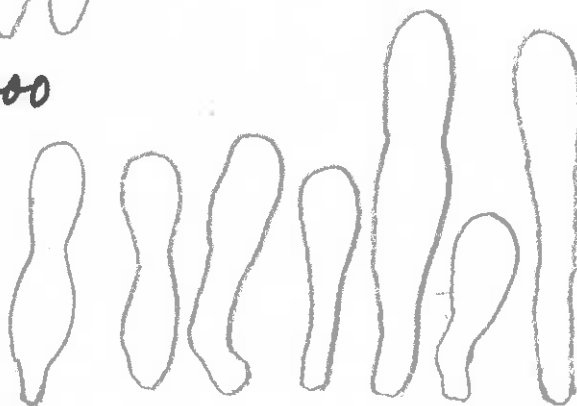
Spores 5.5-7  $\mu$ , globose, minutely echinulate. Pleurocystidia 32-43 x 6-9  $\mu$ , clavate-appendiculate; cheilocystidia clavate, ventricose, dumb-bell, 25-50 x 6-8  $\mu$ . Gill trama of subparallel hyphae, 4-11  $\mu$  broad. Pileus trama interwoven. Cuticle repent; no erect hyphae found. Clamp connections present on the cuticular hyphae.

*Crepidotus nephrodes* (B+C) ~~face~~  
*cyphidius*

No. 19157



Pl - x 1000



Ch - x 1000

CREPIDOTUS CYSTIDIOSUS sp. nov.

PHOTO

(No. 24946)

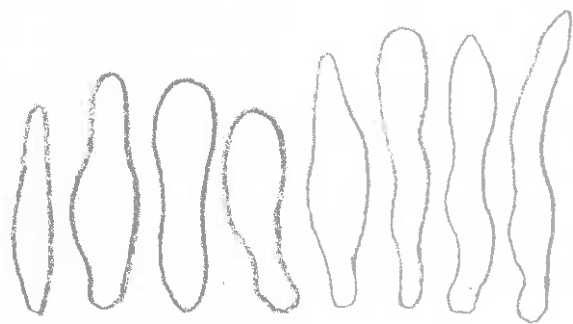
Pileus 3-6 cm broad, applanate, hygrophorous, white when dry, quickly watery-brown when wet, glabrous, striate. Context white; odor mild, taste fungoid.

Lamellae adnate, broad to medium broad, close to sub-distant, "sage brown," edges even, thin.

Stipe none; pileus laterally attached by a white tubercle, with a villose tomentum.

Spores in deposit: "sage brown" with a slight olive tinge; spores globose, 5-7  $\mu$  diameter, minutely punctate. Basidia 22-26 x 5-7  $\mu$ , 2-4-spored. Pleurocystidia 26-40 x 4-8  $\mu$ , clavate to ventricose; cheilocystidia 24-35 x 5-7  $\mu$ , clavate (a few appeared to be collapsed against the gill edges). Gill trama subparallel, hyphae 5-9  $\mu$  broad. Pileus trama very loosely interwoven. Cuticle of repent hyphae, some of the surface, colorless hyphae not incrusted. Clamp connections on the cuticular hyphae and on the tomentum at the base of the pileus.

*Oepidotus* ~~*neptis*~~ *cytidiosus*  
No. 24946



Pl - x 1000



Ch - x 1000

*crepidotus*  
CREPIDOTUS H-25528

~~25528~~

on oak log, Kepart Prong, June 7, 1963.

Pileus 1.5-5 cm. broad, white, hygrophanous, watery brown when wet, fan-shaped to semi-orbicular, glabrous, tomentose at base, striate. Context white; odor fungoid, taste mild then slightly bitter.

Lamellae white then brownish, broad, ventricose, close.

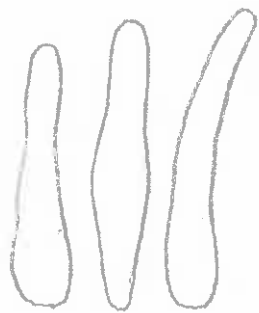
Stipe none; attached by a prominent tubercle.

Spores 5-7  $\mu$ , globose, punctate. Basidia 28-34 x 6-7  $\mu$ , 2-4-spored. Pleurocystidia 33-40 x 5-8  $\mu$ , obclavate or ventricose, scattered; cheilocystidia 20-34 x 5-8  $\mu$ , clavate or subventricose. Gill trama subparallel to slightly interwoven, hyphae 5-10  $\mu$  broad. Pileus trama interwoven. Cuticle of repent hyphae, with rare, widely scattered pilocystidia, 28-42 x 5-6  $\mu$ , more or less cylindric or filamentous, at times subcapitate. Clamp connections present.

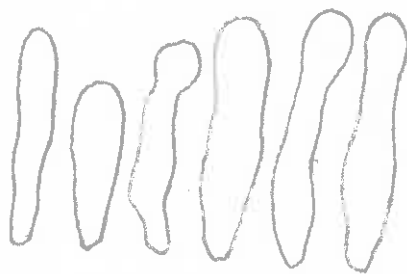
Same as  
~~Not~~ Deegan-81.

1

*Orepidotus* H-25528  
*cytidicus*



Pl - x 1000



Ch - x 1000



Pils - x 1000



Crepidotus sp. nov.

CREPIDOTUS No. 25811

On oak stump, near LeConte, Aug. 5, 1963.

Pileus white, hygrophanous, striatulate. Context thin, whitish; odor slight, taste soon bitterish.

Lamellae close, broad, white, then brownish.

Spores 5-7  $\mu$ , globose, punctate. Pleurocystidia 26-34 x 7-9  $\mu$ , clavate to subfusoid; cheilocystidia 22-30 x 4-6  $\mu$ , subventricose, clavate. Gill trama interwoven-vesiculose, hyphae 5-12  $\mu$ . Pileus trama loosely interwoven. Cuticle of repent hyphae, bearing scattered pilocystidia. Clamp connections present.

PHAEOMARASMIUS DISTANS (Pk.) Singer

Lilloa 13:83. 1947

Crepidotus distans Pk., N.Y. State Museum Ann. Rept. 44:132. 1892.

Pileus 4-8 mm broad, convex, tawny, minutely pubescent, margin distantly sulcate-striate.

Lamellae adnate, concolorous with the pileus, broad, very distant.

Stipe eccentric, reddish-brown, minute, about 2 mm long.

Spores 10-14 x 7-9  $\mu$ , ellipsoid, smooth, with a callus at the apex, rusty colored, with a thick double wall. Basidia 27-30 x 7-9  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 50-64 x 5-12  $\mu$ , cylindric, hair-like bulbous, usually wavy-constricted. Gill trama interwoven. Cuticle bearing dense, brown, septate, at times branched hyphae 4-6  $\mu$  broad, with ridge-like incrustations, hyphae forming a trichodermium. Clamp connections present.

Habit, Habitat, and Distribution - On bark of Grataegus tomentosa, New York, September.

Material Studied - NEW YORK: Peck, type of Crepidotus distans, collected by Peck, at Carrollton, September.

Observations - Singer (1947), after studying the type of C. distans, proposed the new combination Phaeomarasmius distans (Pk.) Sing. His move is justifiable on the grounds that this species has smooth spores with a callus but no germ-pore, and a trichodermial epicutis of brown pigmented, incrustated hyphae on the pileus surface.

CREPIDOTUS DISTANS Pk.

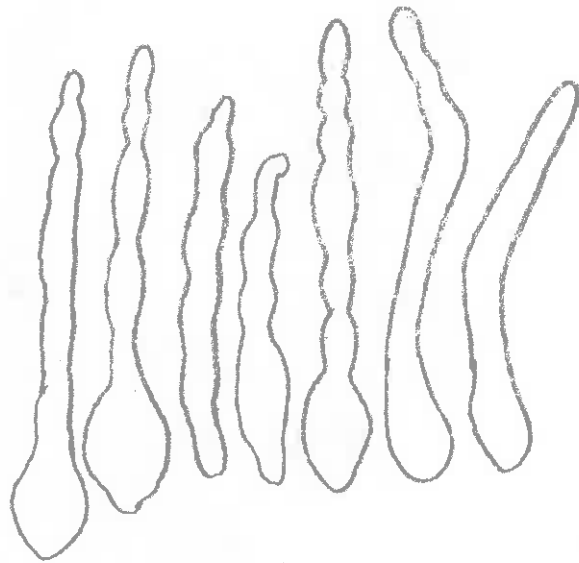
Type

Spores 10-14 x 7-9  $\mu$ , ellipsoid, smooth, with a callus at the apex, rusty colored, with a thick double wall. Basidia 27-30 x 7-9  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 50-64 x 5-12  $\mu$ , cylindric, hair-like bulbous, usually wavy-constricted. Gill trama interwoven. Cuticle bearing dense, brown, septate, at times branched hyphae 4-6  $\mu$  broad, with ridge-like incrustation, hyphae forming a trichodermium. Clamp connections present on the epicuticular hyphae.

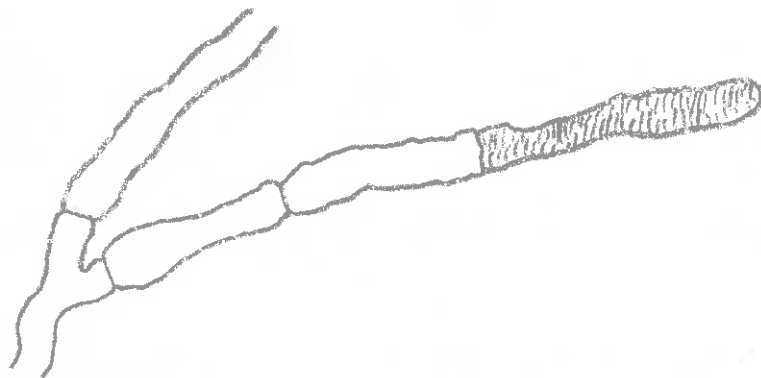
Singer proposes Phaeomarasmius distans (Pk.) Singer (Lilloa 13:83).

Type collected on bark of thorn, Crataegus tomentosa, at Carrollton, N.Y., Sept.

*Crepidotus distans* PK.  
Type



Ch - X 1000



Epicuticular hypha - X 1000

*= crocophyllus*  
CREPIDOTUS DORSALIS (Pk.) Sacc.

Syll. Fung. 5:883. 1887

Agaricus (Crepidotus) dorsalis Pk., N. Y. State Mus. Nat. Hist.  
Ann. Rept. 24:69. 1872.

Pileus 1.5-3 cm. broad, sessile, dimidiate or subreniform, flat or slightly depressed behind, reddish-yellow, slightly fibrillose-tomentose, at times fibrillose-scaly, distinctly tomentose at the point of attachment, margin decurved, slightly striate. Context fleshy.

Lamellae rounded behind, subemarginate, close, broad, ventricose, yellowish, becoming brownish-ochraceous or subferruginous.

Stipe none.

Spores 5.5-7  $\mu$ , globose, punctate, brown under 'scope, a few faintly 5-6-sided when observed from the end-view. Basidia 25-28 x 6-7  $\mu$ , 4-spored. Pleurocystidia none; cheilocystidia 32-42 x 3-7 (10)  $\mu$ , cylindric to clavate, at times constricted and more or less capitate. Gill trama undulating subparallel. Pileus trama of interwoven hyphae. Cuticle usually a trichodermium, the surface bearing long, pale brown, septate hyphae, which may be incrustated, often branched, usually in bundles which form the fibrillose scales, and also colorless hyphae. Clamp connections present on the hyphae at the point of attachment and on the epicuticular hyphae.

Observations. - Pilat (1948) lists several species as synonyms of C. applanatus (Pers. ex Fr.) Karsten; and regards globiger Berk., fulvifibrillosus Murr., and crocophyllus Berk. as varieties of applanatus.

CREPIDOTUS DORSALIS (Pk.) Sacc.

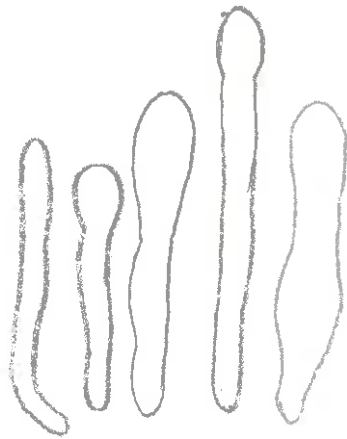
Type (from Grieg, N. Y., Sept.)

Spores 5.5-7  $\mu$ , globose, punctate, brown under 'scope, a few faintly 5-6-sided when observed from the end-view. Basidia 25-28 x 6-7  $\mu$ , 4-spored. Pleurocystidia none; <sup>at times subventricose,</sup> cheilocystidia 32-42 x 3-7 (10)  $\mu$ , cylindric to clavate, at times constricted and more or less capitate. Gill trama undulating subparallel. Pileus trama of interwoven hyphae. Cuticle usually a trichodermium, the surface ~~pale brown~~, <sup>pale brown,</sup> bearing long, <sup>^</sup>septate hyphae, which may be incrustated, often branched, usually in bundles which form the fibrillose scales, <sup>and also colorless hyphae.</sup> Clamp connections present on the hyphae at the point of attachment and on the epicuticular hyphae <sup>(both brown + colorless).</sup>

In the type, the gills are broad + close or crowded.

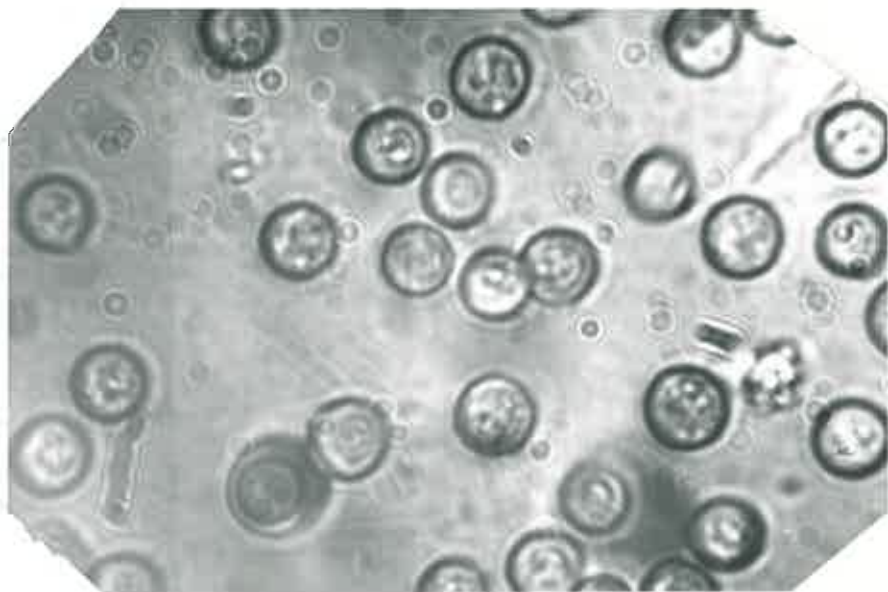
*Orepidotus dorsalis* (PK.) Sacc.

Type



Ch - x 1000





*Crepidotus dorsalis* Pk. - Spores of type

CREPIDOTUS DUSSII Pat.

Bull. Soc. Myc. Fr. 18:173. 1902.

*serice,*  
Pileus 3-5 mm. broad, <sup>^</sup>convex, orbicular, indented behind,  
slightly viscid, glabrous, chrome-yellow, not striate; *red present.*

Lamellae broad, distant, inserted, brownish-yellow.

~~Stipe none.~~

Spores 6-8 x 4.5-5.5  $\mu$ , ellipsoid, thick, ~~X~~double~~X~~-walled,  
smooth, brown, <sup>with a</sup>germ-pore, ~~none~~. Pleurocystidia none; cheilo-  
cystidia 22-52 x 5-10  $\mu$ , variable: <sup>clavate,</sup>subcylindric, ventricose,  
subfusoid, subcapitate to appendiculate, spathulate, ampullaceous  
(flask-shaped). Gill trama interwoven. Cuticle a ~~procutis~~ <sup>platinous zone,</sup>  
~~trichodermium~~, more or less 50  $\mu$  thick, the hyphae 3-5  $\mu$   
broad and imbedded in a gelatinous matrix, resting on an  
hypodermium <sup>about</sup>~~more or less~~ 20  $\mu$  thick. Clamp connections few  
and inconspicuous on the epicuticular hyphae.

Habit, habitat, and distribution. - On dead wood, Guadeloupe.

Material studied. - GUADELOUPE: Patouillard, the type,  
collected at Baines-Jaunes.

Observations. - The description of microscopic characters  
above is based on a study of the type.

Singer & Smith (Mycol. 38:521. 1946) have published this  
as Pleuroflammula.

*Pleuroflammula*  
*Veil present.*  
*See full descr. in*  
*Mycol. 38:521.*

CREPIDOTUS DUSSII Pat.

[=Pleuroflammula dussii (Pat.) Singer]

Type, from Patouillard Herb., at Farlow Herb., collected at Baines-Jaunes, Guadeloupe, on dead wood. Numbers 25 and 411 on the packet.)

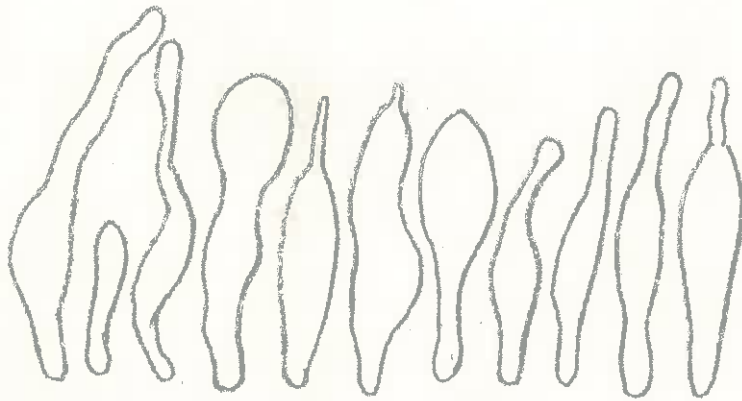
Spores 6-8 x 4.5-5.5  $\mu$ , ellipsoid, thick (double)-walled, smooth, brown, germ-pore noted. Pleurocystidia none; cheilocystidia 22-52 x 5-10  $\mu$ , variable: subcylindric, ventricose, subfusoid, subcapitate to appendiculate, spathulate, ampullaceous (flash-shaped). Gill trama not well-observed (the sections not adequate). Pileus trama interwoven. Cuticle an ixocutis (or ixotrichodermium), more or less 50  $\mu$  thick, the hyphae 3-5  $\mu$  broad and imbedded in a gelatinous matrix, resting on an hypodermium more or less 20  $\mu$  thick. Clamp connections few and inconspicuous on the epicuticular hyphae.

This was made the species typica, and was transferred to the genus Pleuroflammula by Singer. He proposed Pleuroflammula dussii (Pat.) Singer (<sup>apud</sup> ~~see~~ Singer & Smith: Mycologia 38:521. 1946). In his Agar. 2nd ed., p. 559, Singer characterizes the genus Pleuroflammula as non-viscid, but the type shows a distinct gelatinous, cuticular zone.

*Crepidotus dussii* Pat.

Type

(= Platyflammula dussii (Pat.) Fing.)



Ch -  $\times 1000$



Procutis  
(or isotrichodermium)

Hypodermium

Cuticle -  $\times 1000$